The Resonator

Official Newsletter of The Fair Lawn (NJ) Amateur Radio Club

Volume 5, Number 8 **www.FairLawnARC.org** **August 2020**

From The President:

Dear members,

I truly hope that all of you are doing well, especially after Tropical Storm Isaias passed by our state a few days ago and left some damage in our neighborhoods. I know that some of you may still be dealing with power poles and trees being down, and even without electricity at your home. Hopefully that situation will be taken care of and things get back to “normal."

July was an active month for FLARC: we basically had virtual meetings every week, and we had very good participation from members and friends from all over. Our appreciation to Charlie AC2ZU for his excellent “Kawfee Tawk” on Nikola Tesla, very informative and full of good information. Also, Bob KD2BKD gave us a well-attended DMR virtual gathering where "hotspots" were discussed along with other DMR topics including show and tell, and Q&As by those in attendance. Our appreciation to Jim WA2UMP and Jay KP4EOP for sharing their experiences on DMR with our SIG. And to close the month, Dave N2AAM gave us a tour of the radio spectrum from zero all the way up to 300GHz.

Continued on page 45

Inside This Issue

1	President's Message
1	Member Profile – Walt Bilous K3DQB
4	August VE Testing
5	Club Calendar
12	The Way We Were – Fred Belghaus W2AAB
31	Around The Shack – Hal Kennedy N4GG
41	Digital Radio Hotspots – Bob Holstrom KD2BKD
48	Business Meeting Notes

New Member Profile

NAME: Walt Bilous **CALL: K3DQB**
(Formerly WA2DQB and WN2DQB)

What do you do/what did you do for a living?

Currently, I am semi-retired and working part time as a consultant for a local electronics company. I teach Electronics Engineering Technology classes for their technicians. I have my own photography business and specialize in nature, landscape, urban and Civil War battlefield photography.

My website is www.appalachianviews.net

Before I became semi-retired, I taught Electronics Engineering Technology and common core classes at a local college (post-secondary level; Associate Degree) for 13 years. I was the Department Chairman there for the EET Department for 5 years.

How did you get interested in ham radio?

Like many others, I was a shortwave listener from about age 5 and used my parents’ Philco floor model radio to listen to stations from around the world. I was intrigued by the CW ship to shore stations sending their broadcasts and decided to learn Morse Code on my own. I was in 6th grade at this point. While in 7th grade, I heard about a licensing class given by the Nutley Amateur Radio Society and signed up. I passed the code test but failed the theory. I tried again in 8th grade and same result. Finally, in 9th grade, I passed my test and received WN2DQB as my call. The rest is history.

What parts of the hobby most interest you?

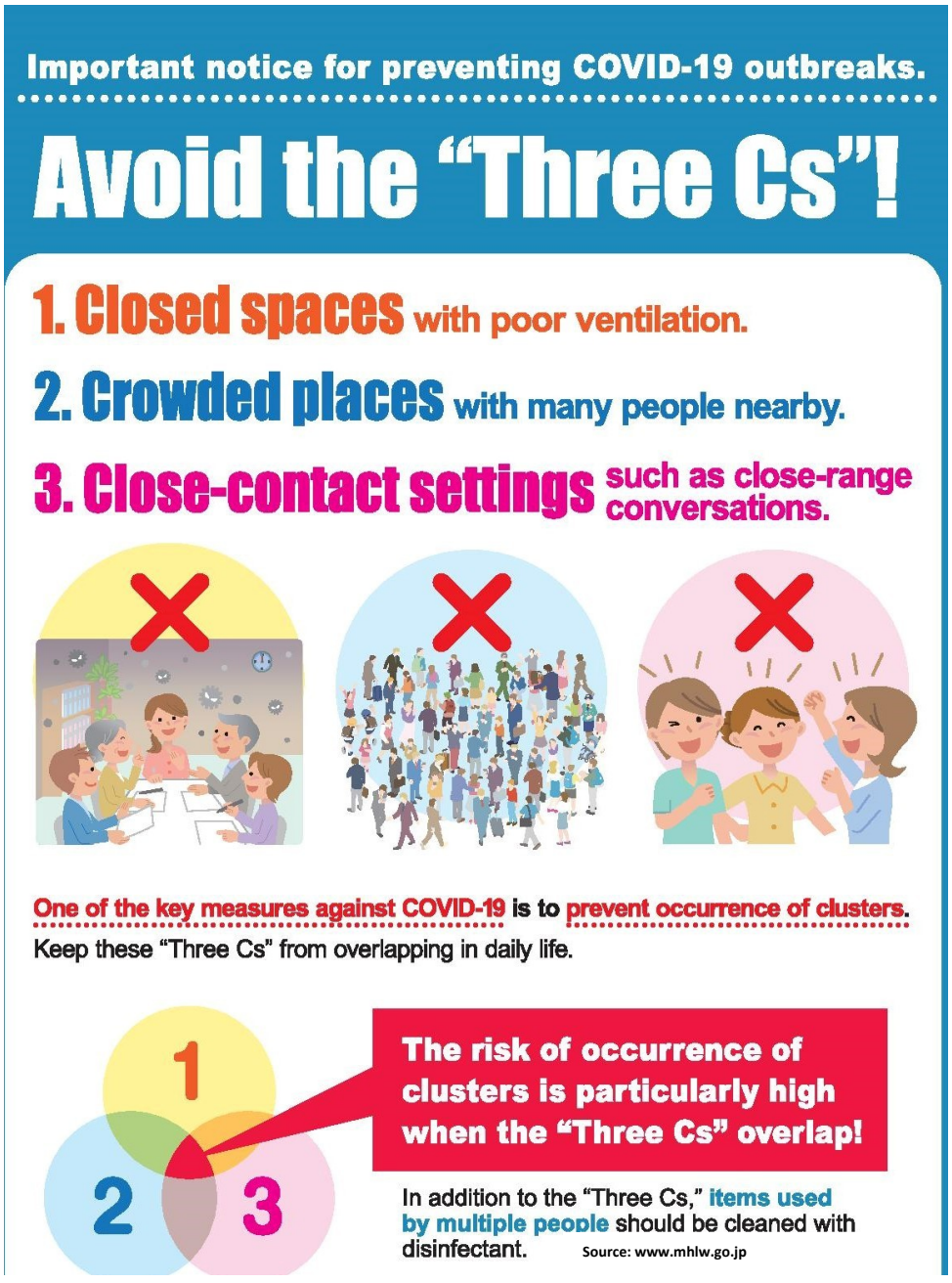
I have always loved CW and use it often, mostly during contests. Lately, I have been using FT4 and FT8 on the HF bands. I also love DXing and earned my DXCC about 10 years ago. I have been active with APRS Packet (ARISS) through the ISS and connect with the ISS at least 5 times per week on 145.825 MHz.

Continued on page 11

Fellow FLARC Members,

As we all know, the coronavirus continues to be top of the news and that the club is closed until further notice. Out of an overabundance of caution and our care for your safety, all FLARC events are postponed until further notice due to COVID-19.

Check in on our nightly health and welfare net on the W2NPT repeater at 7:00 PM and let us know how you're doing. You may be isolated at this time but you are not alone. Stay safe!



Nomar NP4H -- July 1, 2020

The Club Fair Lawn ARC is the fastest growing ham club around, with five operating positions in a permanent clubhouse. Visitors and guests are always welcome. The club is open every Friday night from NLT 6:30 PM. Business meetings are the first Friday of the month at 7:30PM.

2020 Officers, Committees and Assignments

President	**Nomar Vizcarrando**	**NP4H**
Vice President	**John L. Howard**	**W2JLH**
Treasurer	**Al Rasmussen**	**WA2OWL**
Secretary	**Randy Smith**	**WU2S**
Trustee	**Skip Barker**	**KD2BRV**
Trustee	**Ed Efchak**	**WX2R**
Trustee	**Don Cassarini**	**N2PRT**
Field Day	**Steve Wraga**	**WA2BYX**
Member Services	**Judith Shaw**	**KC2LTM**
Publicity	**Ed Efchak**	**WX2R**
Publicity	**Gene Ottenheimer**	**WO2W**
Publicity	**Judith Shaw**	**KC2LTM**
Publicity	**Susan Frank**	**W6SKT**
Program	**Lowell Vant Slot**	**W2DLT**
Publicity	**Karl Frank**	**W2KBF**
Publicity	**Nomar Vizcarrando *(ex officio)***	**NP4H**
Social Media	**Dave Marotti**	**NK2Q**
Video/YouTube	**Thom Guida**	**W2NZ**
VE Liaison	**Gene Ottenheimer**	**WO2W**
VE Liaison	**Pete Senesi**	**KD2BMX**
Education	**Gordon Beattie**	**W2TTT**
Education	**Randy Smith**	**WU2S**
Education	**John L. Howard**	**K2JLH**
Education	**Fred Wawra**	**W2ABE**
History	**Fred Belghaus**	**W2AAB**
Health and Welfare	**Judith Shaw**	**KC2LTM**
Photographer	**Don Cassarini**	**N2PRT**
W2NPT Trustee	**Paul Cornett**	**W2IP**
Technical	**Paul Cornett**	**W2IP**
Technical	**Randy Smith**	**WU2S**
Technical	**Fred Wawra**	**W2ABE**
RACES Director	**Dave Gotlib**	**KD2MOB**
RACES Liaison	**Steve Wraga**	**WA2BYX**
Newsletter Editor	**Ed Efchak**	**WX2R**
FL Town Liaison	**Gene Ottenheimer**	**WO2W**
Net Scheduler	**Brian Cirulnick**	**KD2KLN**
Quartermaster	**Brian Cirulnick**	**KD2KLN**

Fair Lawn RACES/ARES Corner

Hurricane season is here and FL-ARES is ready to assist other ARES groups such as Bergen County ARES and Passaic County ARES during the Hurricane Season. We were on Standby Status during Tropical Storm Isaias and would like to thank those stations who participated during the tropical storm. Please note the new time of the FL-ARES KB2FLA Nets. They are now taking place on Wednesdays at 2000 hours on the FLARC and NJ2BS Repeaters. Please join us every Wednesday for any updates, messages or activities which may take place. A thank you goes out to Hank WA2CCN for providing FL-ARES with Radiogram practice sessions.

You may or may not be aware that the W2NPT Repeater is now linked to the NJ2BS Repeater through KD2BKD-L on Echolink. With the new link, our footprint in Bergen County as well as the surrounding area on the 2 meter band has expanded! A special thanks goes out to Gordon W2TTT who owns the NJ2BS Repeater and Bob KD2BKD for linking the repeaters. Also, a thank you goes to Paul W2IP for making it happen on the W2NPT end.

The Fair Lawn ARC Repeater info is: RX 145.47 MHz / TX 144.87, PL Tone 167.9 Hz. Echolink W2NPT-R. The NJ2BS Repeater info is: RX 146.835 MHz / TX 146.235, PL Tone 151.4 Hz. Echolink KD2BKD-L. FL-ARES would like to thank the FLARC for the use of its repeater as well as the Venture Crew 7373 Club for the use of their repeater.

We are fortunate to make Fair Lawn and the surrounding communities our home. With our leadership and support from the FLARC we can grow and be of assistance in many community events. We are always seeking new members to join FL-ARES.

Continued on page 38

SPECIAL RELEASE:

AMATEUR RADIO TESTING AT THE FAIR LAWN AMATEUR RADIO CLUB

On August 8th and August 22nd 2020, Fair Lawn Amateur Radio Club will resume amateur radio test sessions on a trial basis. These sessions will be held in the commuter parking lot of the **Fair Lawn Recycling Center. The location is at 19-25 Saddle River Road, Fair Lawn, NJ 07410.** Inclement weather will cancel testing.

There will be two sessions each day. Session 1 is at 09:00 AM and session 2 starts at 10:15 AM**. A document will be provided to you prior to the date to indicate the session assigned to you.** You must have it with you to take the test. When you arrive, please tune your FM radio to 87.9 so you can listen to instructions.

Prior to Testing:

Send an email to wo2w@arrl.net requesting to book your spot.

Upon Arrival:

Stay in your vehicle as you will be directed to an assigned parking space. **Expect to remain in your vehicle for the duration. (Note NO BATHROOMS ARE AVALABLE).** You must have a government issued ID such as a valid driver's license or passport, and **3 completed copies of the FCC CSCE form.**

Please Bring With You:

- **You MUST bring and WEAR personal PPE items including a face mask, and gloves.**
- 2 pens and 2 pencils, None will be provided to you due to possible virus transmission.
- A clipboard or a hard surface to write on and be visible to the volunteer examiners.
- **Your FRN number, and (if licensed) a copy of your ham license or a valid CSCE (Certificate of Successful Completion Exam).**
- **A completed form 605 (which will be sent to you ahead of your test session)**
- Additionally, the **$15.00 exam fee**. This is payable in cash (exact amount is a must).

The Testing Procedure:

- Testing will be performed in your personal vehicle. **You must remain in your vehicle for the duration of the event.**
- Only the candidate testing may remain in the vehicle--**do not bring any passengers/supporters with you.**
- Please clear front area of vehicle of all paperwork, computers, cell phones, etc. anything which could be used to hold answers to test questions. **Turn off cell phones and place in glove box or out of reach.**
- **Windows must be rolled down** an inch or two so proctors can hear inside the vehicle.
- A masked/gloved Volunteer Examiner will be handing out and picking up tests from each vehicle. **The Volunteer examiner must be able to see you during the whole test.** If at any time you feel unsafe, please feel free to abort the test, return the test materials and safely leave the testing area.

- Let's protect each other….and good luck!
- For information and scheduling, please contact:
- Gene/WO2W
- WO2W@arrl.net
- Visit our website at www.FairLawnARC.org

MASTER EVENT CALENDAR

Out of an overabundance of caution and our care for your safety, (not to mention state law) all FLARC events are postponed or rescheduled until further notice due to COVID-19.

August 7, 2020	**FLARC Virtual Business Meeting [Zoom Room]**
August 21, 2020	**Kawfee Tawk - "Parks on the Air" with Noel W2MSA**
September 18, 2020	**Lowell Van't Slot W2DLT "Working the CQWW SSB Contest At A Caribbean Superstation" – (Tentative)**
October 16, 2020	**OPEN**
October 18, 2020	**Fair Lawn Fall Street Fair (River Road) (Tentative)**
November 27, 2020	**FLARC Auction (Senior Center) (Tentative)**
December 18, 2020	**Kawfee Tawk: Ria Jairam N2RJ "The State Of The ARRL At Year End"**
TBD	**Return Visit To iHeartRadio/WSUS transmitter**
TBD	**Field Trip to Sarnoff Center, Princeton**
	**** 2nd Friday of month**

More Than A Club...
A Community Of Friends!



Hidetsugu Yagi's 130th Birthday Google Doodle

Follow FLARC ON THE WEB

Facebook: http://facebook.FairLawnARC.org

Twitter: @FairLawnARC

Blog: http://blog.FairLawnARC.org

Youtube: http://youtube.FairLawnARC.org

Website: http://FairLawnARC.org

FLARC VEC Exams

Our next test sessions are scheduled August 8th and 22nd beginning at 08:30 at the Recycling Center. Advanced registration is required. The fee is $15.00 (cash only).

SEE PAGE 4 FOR FULL DETAILS.

Please bring positive identification (license, passport, etc.), your original license and a copy, original CSCE and a copy (if credit is needed).

The full exam schedule is on the club calendar at the FairLawnARC.org website. For further information contact VE-Liason@FairLawnARC.org.

Please refer also to the "License Exams" link on the main website--
http://bit.ly/FLARC-Testing

Interested in Chasing DX?

A casual group of FLARCers including Van W2DLT, John KD2NRS, Brad KM2C, Karl W2KBF, Nomar NP4H, Steve WI2W, Jim W2JC, Larry WA2ALY and Fred W2AAB have formed an email group to keep each other in touch in (real) time of when the rare or interesting ones show up to chase.

Interested? See or contact Van W2DLT.

New DMR SIG Created

Lee KD2DRS and Nomar NP4H have stepped forward to create and lead a Special Interest Group (SIG) on DMR [Digital Mobile Radio]. This group is open to all members of the FLARC groups.io group, regardless of experience.

Contact either Lee leecsmith@aol.com or Nomar np4h@aol.com for information on joining.

Or just go to the club website FairLawnARC.org and use the "Join Special Interest Group(s)" link on left.

Equipment Problem?

If you encounter a piece of club equipment, instrument or tool that is not working correctly or is broken in any way, we now have a Trouble Report form that you can use to describe the problem and report it to the Technical Committee -- who will arrange for repair.

2020 — The Year of (Distance) Learning!



Brad KM2C talks through the Flex equipment to kick off the Year of Learning back on January 10th

Please Note: Operating at W2NPT

Starting in January 2019 club trustees have sign-in sheets for all operating positions. There is a clipboard at Operating Position #1, #2 (digital) and #4 with a form on which to sign up for half-hour time slots. No longer first come-first served, in fairness to all who want to use our club equipment and the new antennas.

Get Direct With FLARC!

Here is a direct link to specific club info: just a click away!

http://apparel.FairLawnARC.org
http://auction.FairLawnARC.org
http://blog.FairLawnARC.org
http://calendar.FairLawnARC.org
http://events.FairLawnARC.org
http://exams.FairLawnARC.org
http://facebook.FairLawnARC.org
http://news.FairLawnARC.org
http://swap.FairLawnARC.org
http://tech.FairLawnARC.org
http://youtube.FairLawnARC.org

NEW !

https://groups.io/g/FairLawnARC

July 2020 Blog Traffic

With coronavirus dominating the news, both visitors and page views to the blog were down this month. We've also done more email communications to members.

	July 2020	July 2019	% Change
Views	401	500	-20%
Visitors	189	264	-28%
Posts	5	0	**

There is new content nearly every day so it's really worth the look at both FairLawnARC.org and the blog.
http://blog.FairLawnARC.org

August 2020 Near and Far Net Controls

Here is the roster for net controls for the upcoming month as reported by Brian KD2KLN:

Date	Net Control
August 3rd	KD2MOB
August 10th	NP4H
August 17th	KD2KLN
August 24th	You ??
August 31st	N2AAM

The Near and Far Net now averages close to 20 check-ins on an average week! Cool beans.

But we need more volunteers to be net controls - -if everyone takes their turn it's less burden on the others. And it's easy.

Volunteer --- don't wait to be asked (unless you really want to be flattered).

Ham Radio Is Contagious
And It Won't Make You Sick!!

Ed-itorial: Practice Makes Perfect

I really got frustrated tonight. I worked W8VLN in Dayton on 7025 CW. My code speed was 20 WPM, about usual for me. But my sending was poor—lots of errors, my listening skills equally so. Simply said, a piss-poor QSO from yours truly.

I can't blame the QRM and QSB; I can only blame me. To get good at CW, you have to do something every day. The adage is that if you spend an hour a day on a specialty for a year, you'll become an expert. So it is.

I beat myself up a bit over this QSO; even sent "SRI" to Larry for my poor professionalism. But there is time for improvement—a 50% improvement over the short-term is perfect kaizen. That is my goal… better CW… practice every day and get back up on the bike whenever I fall off.

A better solar cycle is coming. I plan to be ready for the DX.

DE Ed WX2R

Club Apparel — Get Them While They're RED!

Club apparel is always in vogue. Red is always "in" and your club friends all have them... you *want* a shirt or jacket for the next FLARC event! Great for Field Day!

Don't forget.... they're easy to order.
Go to www.hamthreads.com
or visit http://apparel.FairLawnARC.org

Check out the item selection that is posted on the FLARC website (with pictures and prices). Order the shirts or other items you want with either the regular FLARC logo or the still-cool 60th anniversary logo. Note: **RED** is the primary and preferred club standard shirt color**.**

And why not WEAR your nice red shirt when you come to the club, especially for meetings and events.



A nice sea of red at the FLARC 2017 business meeting at the Senior Center

2020 FLARC Speaker Series Locations:

SPEAKERS WHO ARE FLARC MEMBERS:
FLARC CLUBHOUSE

SPEAKERS WHO ARE INVITED GUESTS:
FAIR LAWN SENIOR CENTER

Help Wanted

The Publicity Committee is looking for some new members to help continue to improve the marketing and promotion of the club, it's activities and amateur radio. This is an active group so a willingness to participate is a strong plus. Experience in digital marketing and/or public relations is a plus.

Call Ed WX2R at 802-282-6700 or email him at wx2r@arrl.net if you're interested.

Thanks To All For Rejoining FLARC In 2020!!

BEQUEATHS AND DONATIONS

Planned gifts usually imply the family donation of amateur equipment to the club when someone has become a Silent Key. But it can be more. Club members might consider making a gift through a will or trust; gifts that help provide lifetime income to the club. Consult with your lawyer, estate planner or tax advisor if you feel such as gift is worthy.

About The Club

The Resonator is published monthly and is the official (and only) newsletter of The Fair Lawn Amateur Radio Club. FLARC was established in 1956 and has met continuously since inception. **The club is sponsored by the Borough of Fair Lawn.** The club meets every Friday at 6PM at the club station in The Fair Lawn Community Center, 10-10 20th Street, Fair Lawn, NJ. Business meetings are the first Friday of the month at 7:30 PM**.**

Visitors ARE ALWAYS welcome at our meetings.

FLARC operates the W2NPT repeater (145.470- PL **167.9**) located high atop the Community Center. The analog repeater is open to all amateurs for use without restrictions.

The club has over one hundred paid members.
Dues are currently $25 per year/$20 for new members.

For more information, please see our website, at
http://membership.FairLawnARC.org

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"POP-UP TUESDAYS" WILL BE BACK IN A WHILE!

Check the club calendar, the club website and your email each week to check when we will resume.

PUBLICITY COMMITTEE NEWS

The Publicity Committee is seeking new members to help grow the club with its varied activities. Enthusiasm desired… no experience necessary. Contact Ed WX2R or any other committee member.

FAIR LAWN'S COMMUNICATIONS CENTER!

With New Antennas On The Roof!



2020 *Near and Far Net* Check-In's

Now in its third year, the FLARC *Near and Far* net is chugging along each week. Here is list of our check-ins beginning on New Year's Night in no particular order. Mondays at 8PM on the repeater.

Call	Name
N2AAM	Dave
WO2W	Gene
W2DLT	Van
KD2MOB	Dave
W2JC	Jim
WI2W	Steve
N2SU	Bob
N2OEL	Noel
WX2R	Ed
W2AAB	Fred
KD2KLN	Brian
W2MSA	Noel
W2KBF	Karl
AC2ZU	Charlie
W3EH	George
KC2TBD	Ron
TG9AOR	Joe
N2OEL	Noel
N2JLF	Jim
W2TAB	Tom
KC2TBD	Ron
KA2YRA	Steve
WA2BYX	Steve
KD2BKD	Bob
KC2K	Stan
KA2YRA	Steve
WA2CCN	Hank
W2TTT	Gordon
NJ8Y	Ahmed
NJ2BK	Bruce
W2CQX	Dan
W2KNG	Jim
WK2T	Lee
W2NZ	Thom
K2PD	Don
KD2JIP	Dave
K2ZVL	Van
KC2ASA	Peter
W2AAB	Fred
KD2LRX	Jason
K3DQP	Walt
KD2TVZ	Ed

2019-20 Member Profiles

The year is now complete and here is a list of the 2019 monthly profiles. See past profiles elsewhere in *The Resonator* to check back in the archives to see each featured member's background.

Month	Name	Call Sign
January 2019	Dave	KD2JIP
February	Jim	K2ZO
March	Zach	KC2RSS
April	Bob	N2SU
May	Stan	KC2K
June	Steve	WA2BYX
July	Roger	K2RRB
August	Judith	KC2LTM
September	Chris	W2TU
October	Bob	N2SU
November	Bob	WA2ISE
December	Carol	KD2NMV
January 2020	Gordon	W2TTT
February	Chris	KD2JQZ
March	Glenn	KD2MDR
April	Steve	K2SAB
May	Ahmed	NJ8Y
June	Charlie	AC2ZU
July	Jim	N2JLF

Congratulations!

The July VE testing session was cancelled due to the cononavirus pandemic. So … no test session results. SEE TESTING DETAILS FOR AUGUST ELSEWHERE IN THIS ISSUE!!

Name	Call	New License
No activity		

Past FLARC Member Profiles

Here is a list of past member features and we welcome your recommendations for new profiles -- including your own.

Month	Name	Call Sign
January 2016	Pete	KB2BMX
February	Marco	KC2ZMA
March	Ron	KC2TBD
April	Kai	K2TRW
May	Larry	WA2ALY
June	Dave	N8MAR
July	Steve	WI2W
August	Thom	W2NZ
September	Brian	KD2KLN
October	Brad	KM2C
November	Al	WA2OWL
December	George	W3EH
January 2017	Fred	W2ABE
February	Dave	KD2MOB
March	Randy	WU2S
April	Lee	KD2DRS
May	Gene	WO2W
June	Carol	KD2NMV
July	Kevin	KC2KCC
August	Robert	KD2NOG
September	Robert	KD2BKD
October	John	KD2NRS
November	Fred	W2AAB
December	Margaret	W2GB
January 2018	Brian	KD2OAZ
February	Bennett	KO2OK
March	Van	W2DLT
April	Aly	ALØY
May	Bruce	NJ2BK
June	Dave	N2AAM
July	Karl and Susan	W2KBF and W2SKT
August	Steve	KA2YRA
September	Paul	K2PJC
October	Skip	KD2BRV
November	Jim	W2JC
December	Tom	N2AAX

By the way, Randy (WU2S) has compiled a binder of all back issues of *The Resonator* and it's located in the club office. Thanks Randy!!!

Blood Donors Needed In This Time Of Emergency

The Red Cross and related organizations are in great need for blood donations since most corporate blood drives have been cancelled.

Communitybloodservices.com has a network of offices open during the week and would really welcome folks making appointments to donate blood.

Thanks!

American Red Cross

NOW AVAILABLE FREE TO FLARC MEMBERS:

In December and January nearly 120 FLARC members took part in its annual member survey. One of the survey questions asked about your interests in ham radio—specifically what **you** wanted to learn more about.

A composite list of all 26 content-specific interests cross-referenced by member call sign has been created and available to you just for the asking. It's a quick way to find out who has similar interests to yours in the club and to simplify who to look for when you have a question on a specific subject.

A first group has formed from this interest list—see the story elsewhere in The Resonator.

Just drop an email to wx2r@arrl.net and type the word "survey" in the *Subject* box…he will send it back directly to you ASAP.

New Member Profile (Continued)

How did you first find out about FLARC? What are your impressions of the club?

Growing up in NJ (native of Nutley), I knew about the club since I was a novice. I had a number of friends in FLARC and today, I still do have a lot of friends in the club. This whole experience feels like I am coming home in a way. Several current members of FLARC and I got our licenses at the same time and we contacted each other on the novice bands with our 75 Watt crystal controlled transmitters. I really enjoy checking in to the Near and Far Net and the Health and Welfare Nets via Echo-Link. One day, I hope to make it to an in-person meeting and maybe even participate in Field Day with the club.

What else can you tell the club about yourself and/or ham radio?

Early in my Ham Radio career, I got involved with Civil Defense, which then became RACES. Currently, I am very active in York County, PA ARES, RACES and SKYWARN. I was the EC/RO for 5 years, which was quite an experience for me. I became a member of Navy-Marine Corp MARS and was a member for 28 years until the Navy "sunsetted" the program. Now, I am in Air Force MARS and have been for almost 4 years.



Walt K3DQB

New Member Profile (Continued)

What other ham related clubs or organizations do you belong to?

Here's a list of organizations that I belong to:

1. Institute for Electrical and Electronics Engineers (IEEE). I am a Senior Member and belong to the Communications Society and the Engineering in Medicine and Biology Society.

2. Electronics Technician's Association. Also a senior member and a Certified Examiner. I can administer the FCC Commercial license exams including the GROL and GMDSS exams.

3. Member of The Adams County Amateur Radio Society. The club is based in Gettysburg, PA.

4. Member of the Southern Pennsylvania Communications Group (SPCG) radio club located in Shrewsbury, PA. They have a DMR repeater.

5. I am on staff at the York County EOC (Volunteer basis only).

Three Special Interest Groups [SIGs] Formed: Any Others?

We may be in lockdown but there is no lack of club interest. So far, the Radio Monitoring Group has 18 members and we've started a Digital Modes (DMR) group thanks to KD2DRS and NP4H. There is also an FT8 SIG.
Other possible groups, from the member survey, include:

- *Radio Propagation*
- *Antennas and how they work*
- *Kit building*
- *Raspberry pi and Arduino and*
- *Ham radio software*

Anyone interested in leading any of these groups… ? Please contact Nomar NP4H.

SEE THE NEW COLUMN ON DMR BY BOB KD2BKD!!

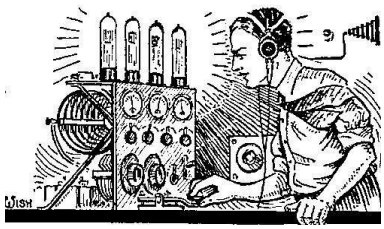


Image from May, 1926 QST, courtesy ARRL

The Way We Were

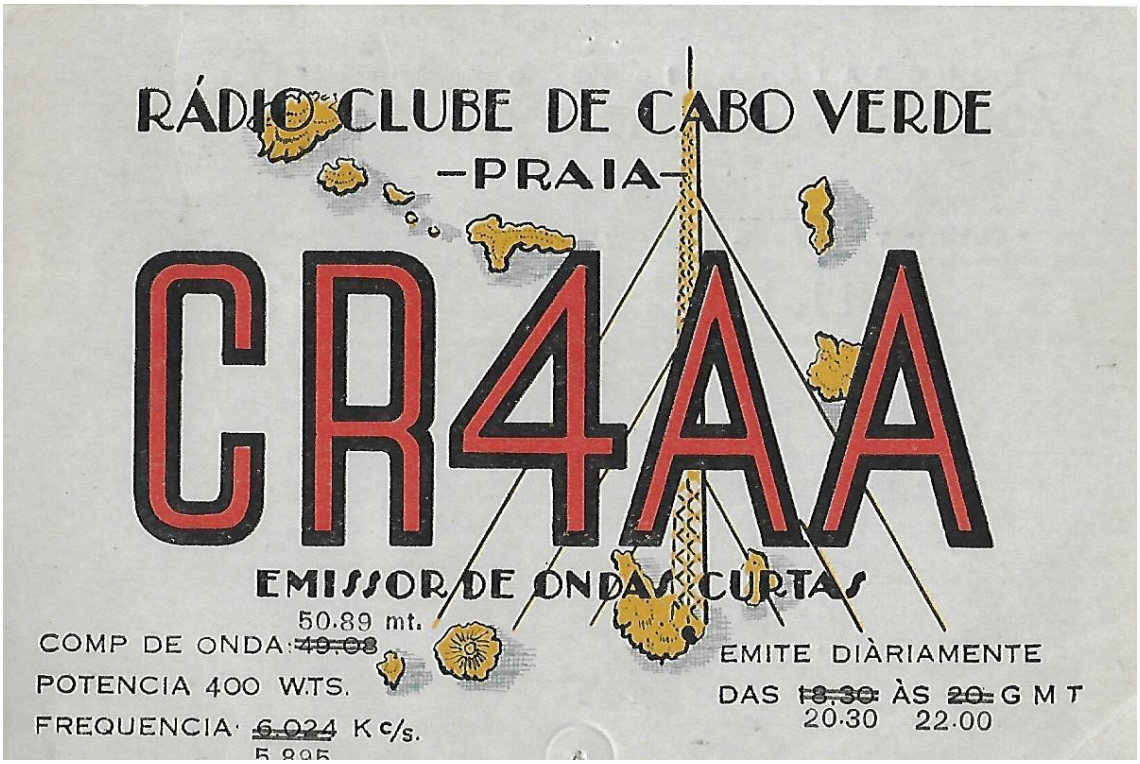
When Broadcast Stations Had "Ham" Call Letters – Part 3

By: Fred Belghaus W2AAB

Note: This article was originally scheduled for publication in the July 2020 Resonator.

Last month, we concluded our study of early domestic shortwave broadcasting stations with experimental call signs. This month, we continue in the same vein, except with foreign stations, sometimes operating as amateur stations, and sometimes as broadcasters.

Our first station is CR4AA, the "Radio Clube de Cabo Verde," which operated on the former Portuguese colony of Cape Verde Island. The call CR4AA would later become a regular amateur radio call.



The card dates from 1957. The station was located in the city of Praia. The power was 5 kilowatts, and they originally operated on a frequency of 3883 kHz in the 75 meter amateur band. [1] Other frequencies were added later, including a television station. The prefix CR4 was an amateur prefix for many years, replaced by D4 after Cape Verde gained its independence from Portugal.

Another similar example is station CR6RA, the Radio Clube de Angola, using the old prefix for this former Portuguese colony in Africa.

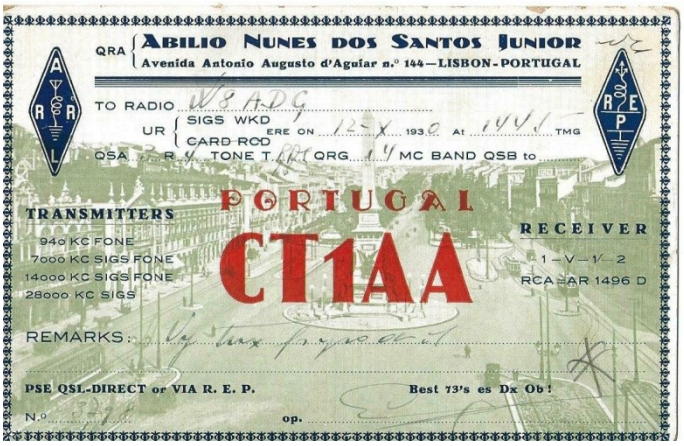
The Way We Were



This card is dated 1958, and includes several stations: CR6RA, CR6RC, CR6RL, and CR6RN. The location was Luanda. CR6RA operated on 9705 kHz.[2] Again, CR6 was a standard amateur prefix for many years, until replaced by D2 upon Angola's gaining independence from Portugal as one of their colonies.

Here's a station that started life as a purely amateur station, and which evolved into a popular shortwave broadcaster. The call was CT1AA, located in Lisbon, Portugal, operated by Abilio Nunes dos Santos, Junior. His ham QSL from 1930 confirms a contact with W8ADG on the 20 meter band. His transmitter was home-built, using an RCA type 852 final amplifier tube.

The 852 was an RF Power Amplifier capable of about 165 Watts on CW, and about 75 Watts on AM phone. [3]

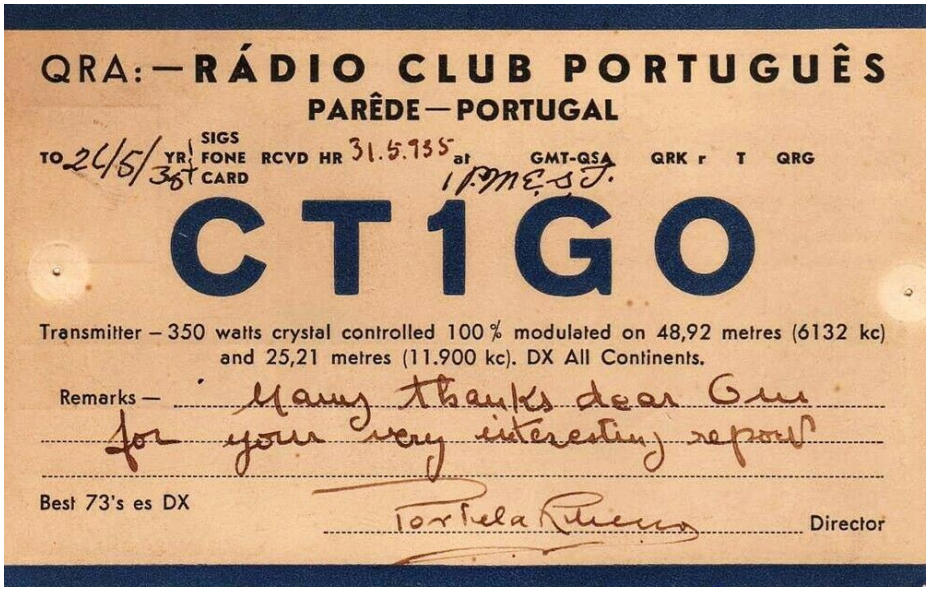


The Way We Were

By 1933, CT1AA had become a shortwave broadcasting station, as shown on this QSL, with views that include the transmitter and two studios:



This CT1GO card dates from 1936, and reports their frequencies as 6132 and 11900 kHz, with a power of 350 Watts.



The Way We Were

Station EA9AH has a curious, if dark history. It was both an amateur and broadcasting station. During the 1930s, under the government of Spanish dictator Francisco Franco, the station was set-up to be the main radio propaganda outlet for Franco's fascist regime. It was also known as "Radio Mediterranee Internationale" located at Nador, in Spanish Morocco, during the period of the Spanish Civil War. [6]

The reverse side of the QSL below is dated January 9, 1938, when Franco was in full control of Spain and its colonial territories. It clearly states its propaganda purposes.



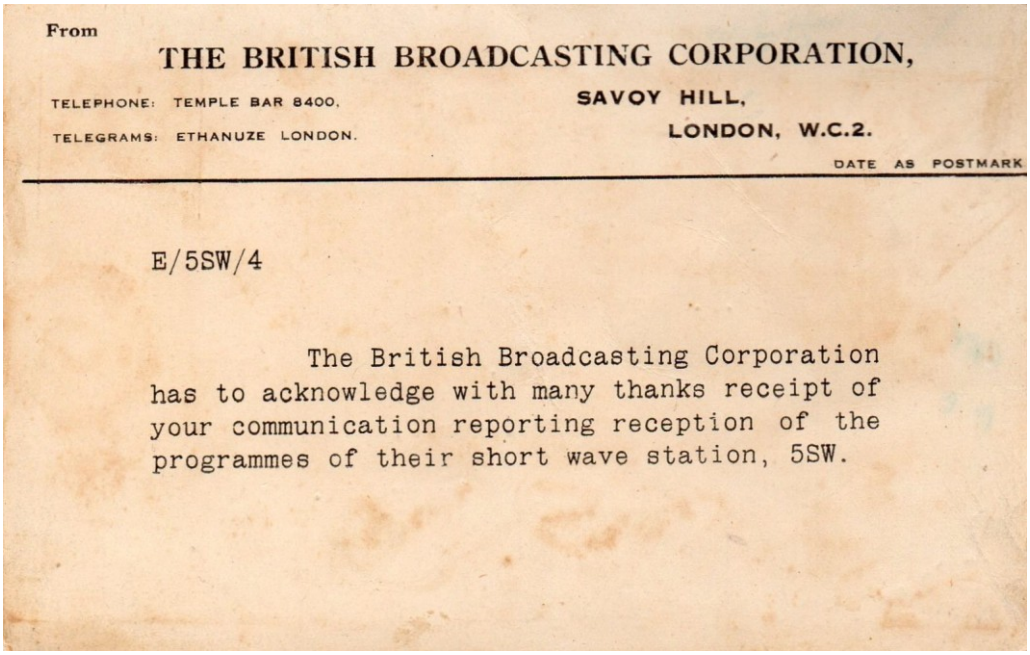
Now, for something entirely different, as Monty Python would say. Did you know that the BBC shortwave outlet originally had a call sign? It was G5SW, which could easily pass for an amateur call today.

G5SW was located in Chelmsford, England, and was established as the BBC "experimental shortwave station."

Domestic BBC transmitters were located in several other English cities such as Daventry, which originally had the call G5XX. [7]

The Way We Were

The QSL below is from station "5SW" (actually G5SW) transmitter 4 of the BBC. It is dated 1929:



From

THE BRITISH BROADCASTING CORPORATION,

TELEPHONE: TEMPLE BAR 8400.
TELEGRAMS: ETHANUZE LONDON.

SAVOY HILL,
LONDON, W.C.2.

DATE AS POSTMARK

E/5SW/4

The British Broadcasting Corporation has to acknowledge with many thanks receipt of your communication reporting reception of the programmes of their short wave station, 5SW.

One of the most famous shortwave broadcasters to this day is HCJB, "The Voice of the Andes" in Quito, Ecuador. The station's first engineer was Clarence Moore, whose U.S. call was W9LZX. Moore was a minister, missionary and avid radio experimenter. In Ecuador, he obtained the amateur call HC1JB. Here's his QSL from 1939:



Moore subsequently established the International Radio and Electronics Corp., later re-named Crown International. The company manufactured electronic equipment, including power amplifiers. [8]

In 1951, while experimenting with wire antennas, Moore obtained a patent for a unique, 2 element full-wave wire loop antenna which he called a "quad." [9] The quad remains a popular, efficient antenna in common use by amateurs from HF to UHF.

But there were other stations in Ecuador with call letters that could easily be mistaken as amateurs. One of these was Radio Quinta Piedad, which operated under the call HC2RL in Guayaquil. During the 1930s they ran 150 Watts (later 200 Watts) on Tuesdays and Sundays. The station was operated by Dr. Roberto Levi.

Here's their QSL card from 1934:



H.C.2.R.L.

ESTACION H.C.2.R.L.
QUINTA PIEDAD

Calle Tomás Martínez Nº 307

Guayaquil—Ecuador S. A.

Dear Sir;
It gives us the pleasure to inform you that we confirm your reception of our station on 7 de Enero de 1934 on 45 meters. Your description of our program checks with our log and we are pleased to make the confirmation.

H.C 2.R.L. Quinta Piedad broadcasts twice each week; on Sundays from 5:45PM to 7: 45PM E.S.T. and on Tuesdays from 9: 15PM to 11: 15PM E.S.T. We have an output power of 150 watts, using 100% modulation. We begin and conclude with the Ecuatorian Antemn.

We thank you very kindly for your exellent report, and you may use this verification for any purpose you wish.

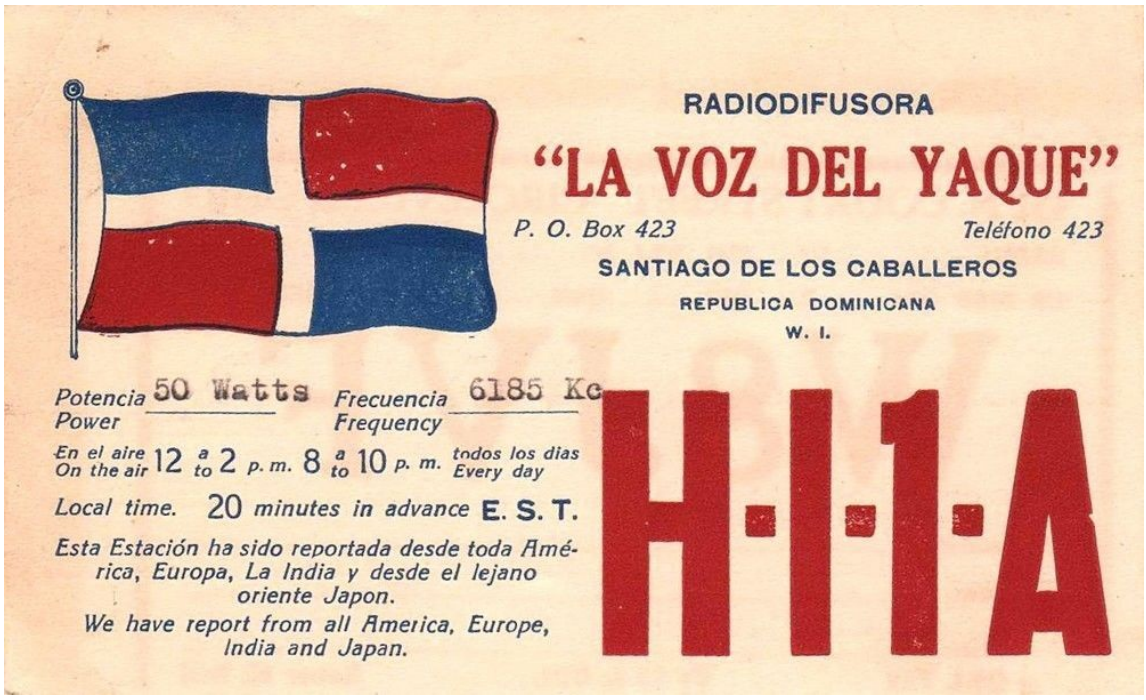
Yours truliest

Dr. ROBERTO LEVI, Director
P. O. BOX Nº 759

But if you think these “ham calls” were only used by broadcasters in the 1930s there’s this, from the station “Ondas Azuayas,” -- still operating HC5JC on 1110 kHz AM, 4980 kHz on shortwave, and Channel 5 TV in Ecuador.



In the Dominican Republic, there was station HI1A, “La Voz del Yaque” from Santiago de los Caballeros on 6185 kHz, running only 50 Watts. Here’s their QSL from 1935:



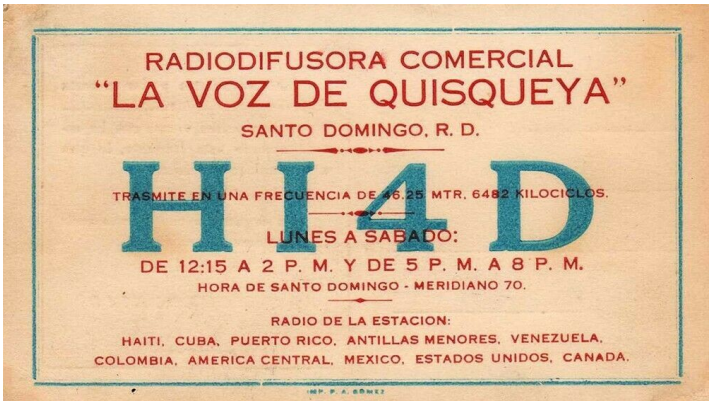
The Way We Were

HI1A operated on a limited broadcast schedule, from 12 noon local time to 2:00 P.M., and from 8:00 to 10:00 P.M. Note that local time is stated as being "20 minutes in advance" of Eastern Standard Time.

Another was "La Voz de Quisqueya," operating under the call HI4D. It was a commercial broadcaster operating on a frequency of 6482 kHz. HI4D was established in 1931 by Jose Santamaria. The station employed only two announcers: Carlos Vallejo de la Concha and Enrique Santamaria.

In 1935, the station was distinguished by being the first broadcaster in the Dominican Republic to be the subject of a labor dispute. Both announcers went on strike, refusing to continue broadcasting for it. [10] Unfortunately, no further information about the station's subsequent history can be found online.

Here's a QSL from HI4D, dated 1935:



Every amateur DX'er knows that the common prefix for Columbia is HK. Recently, though, the prefix HJ is being assigned to amateurs. Well, HJ is an old prefix for shortwave broadcasters there, as in this example dated 1937:



The Way We Were

"Voz de los Laboratorios Fuentes" was the shortwave station of the L. Fuentes Laboratories, a manufacturer of pharmaceuticals that also evidently dabbled in broadcasting. It was located in Cartagena, and was once a very popular station in the 1930s. They sent out many variations of their QSL card. The one above verifies reception of their broadcast on 9500 kHz.

"La Voz de la Victor" in the city of Colon, Republic of Panama, operated as HP5K in the 1930s. Unfortunately, nothing more can be discovered about this station beyond what appears on their QSL card from 1938.

It states that they operated on both 1440 kHz, standard AM, and 6005 kHz on the 49 meter shortwave band. Here's their QSL:



Although many of these stations no longer used "amateur" style calls after 1939, Canadian stations continued to do so at least until the late 1950s. [11] Here's one QSL example from station VE9AI, dated 1948.



The Way We Were

VE9AI was the shortwave outlet for standard AM commercial broadcaster CJCA, Edmonton, Alberta. VE9AI ran 200 Watts [12] and operated on two frequencies: 9540 kHz daytime, 6005 kHz nighttime.

6005 kHz was also a frequency used at other times by Canadian shortwave broadcaster CFCX. VE9 amateur calls are now being issued in New Brunswick instead of VE1 calls. The call VE9AI is now licensed to an amateur station in Fredericton. [13]

Here's an earlier Canadian example -- VE9DR, a shortwave relay station, dated 1932. The station was operated by Canadian Marconi.



VE9DR began its broadcast career on Christmas Day, 1930 from Drummondville, Quebec. It began by relaying commercial AM broadcaster CFCF on 6005 kHz, with a power of 4 kilowatts.

In 1932, the transmitter was moved to Montreal. By 1936, the call was changed to CFCX.

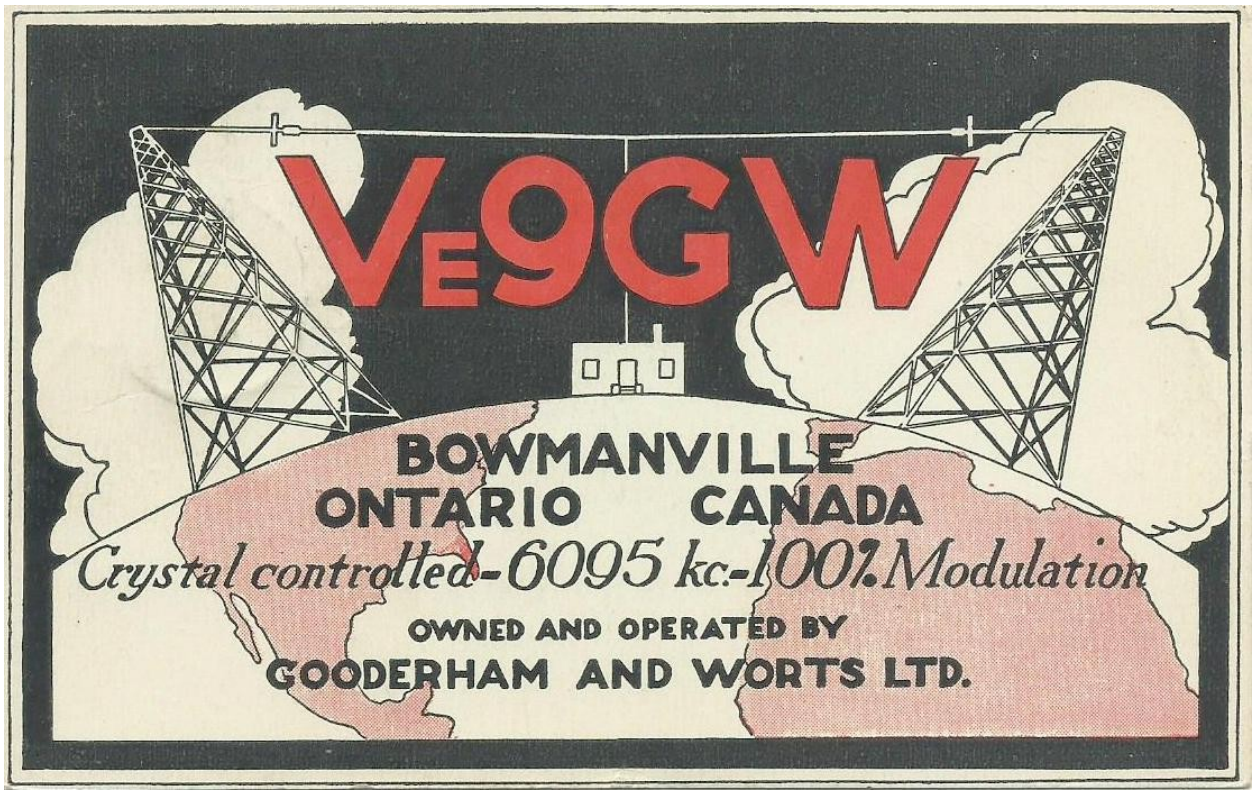
In 1963, the transmitter was moved to the CFCF AM transmitter site at Kahnawake, and its power reduced to 500 Watts.

Station CFCF, which had become the successor call of VE9DR, and whose transmitter was too old to be repairable, was finally taken off the air in 1999. [14]

The Way We Were

VE9GW, located in Bowmanville, Ontario, was owned by Gooderham and Worts, Limited. They were the shortwave relay station for standard AM broadcaster CKGW. [15] VE9GW was later permitted to operate in the 12 meter band, on a frequency of 24,380 kHz. Sometime after this, its call was changed to CRCX. [16]

Here's a colorful QSL card from VE9GW in its heyday, 1932, confirming reception on their frequency of 6095 kHz, on the 49 meter band:



In 1931, shortwave broadcaster CJRX of Winnipeg, Manitoba, suspended its normal operation on 25.6 meters (11,720 kHz), changed its call to VE9CL, and did a "QSY" to 48.8 meters (6150 kHz), while keeping its re-tuned transmitter power at 2 kilowatts.

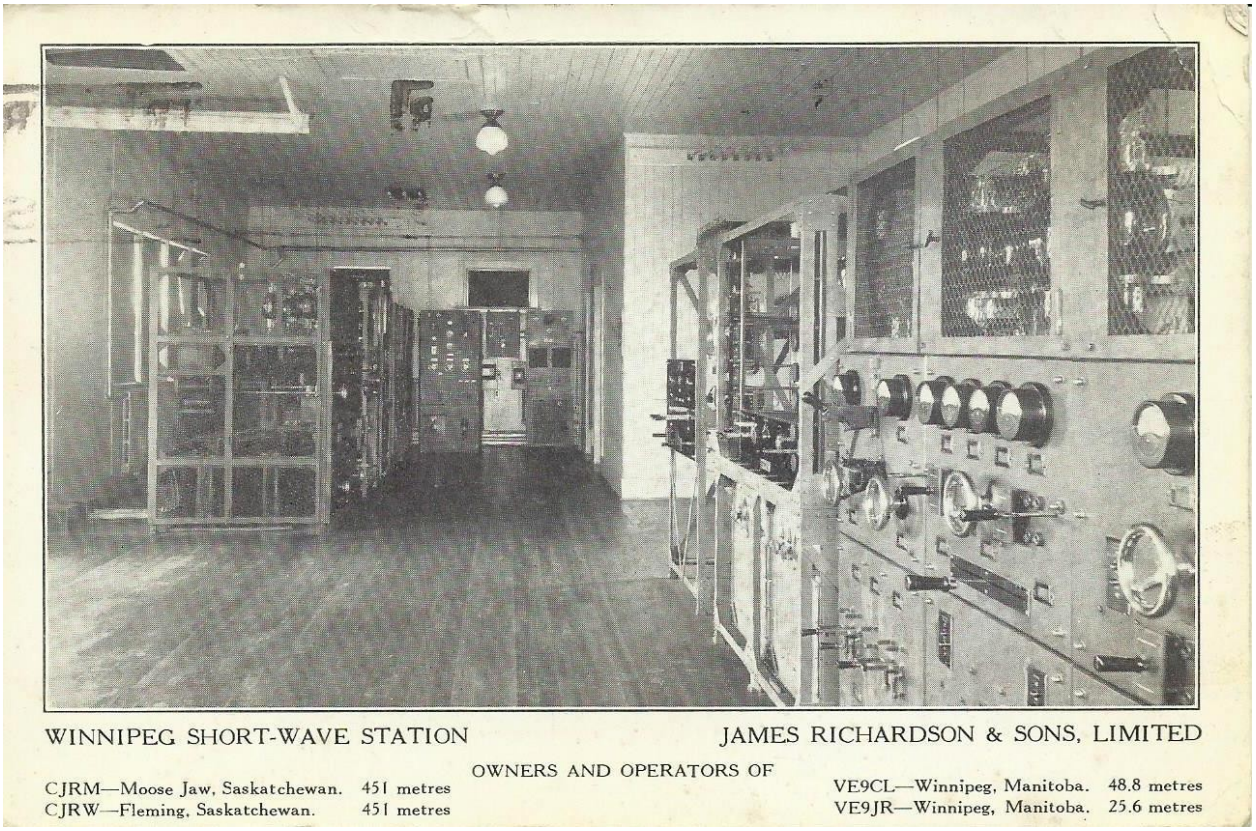
VE9CL was said to not be strong enough for worldwide broadcasting coverage, but it reportedly put in a strong signal throughout North America. One report, however, was received from an SWL in New Zealand, using a two tube standard AM radio with a one tube shortwave converter. [17]

Stations VE9CL and VE9JR were operated by James Richardson & Sons, Limited, from Winnipeg, Manitoba.

By 1932, VE9CL became the shortwave outlet for standard AM broadcaster CJRM (Moose Jaw, Saskatchewan), and VE9JR did the same for AM station CJRW (Fleming, Saskatchewan).

The Way We Were

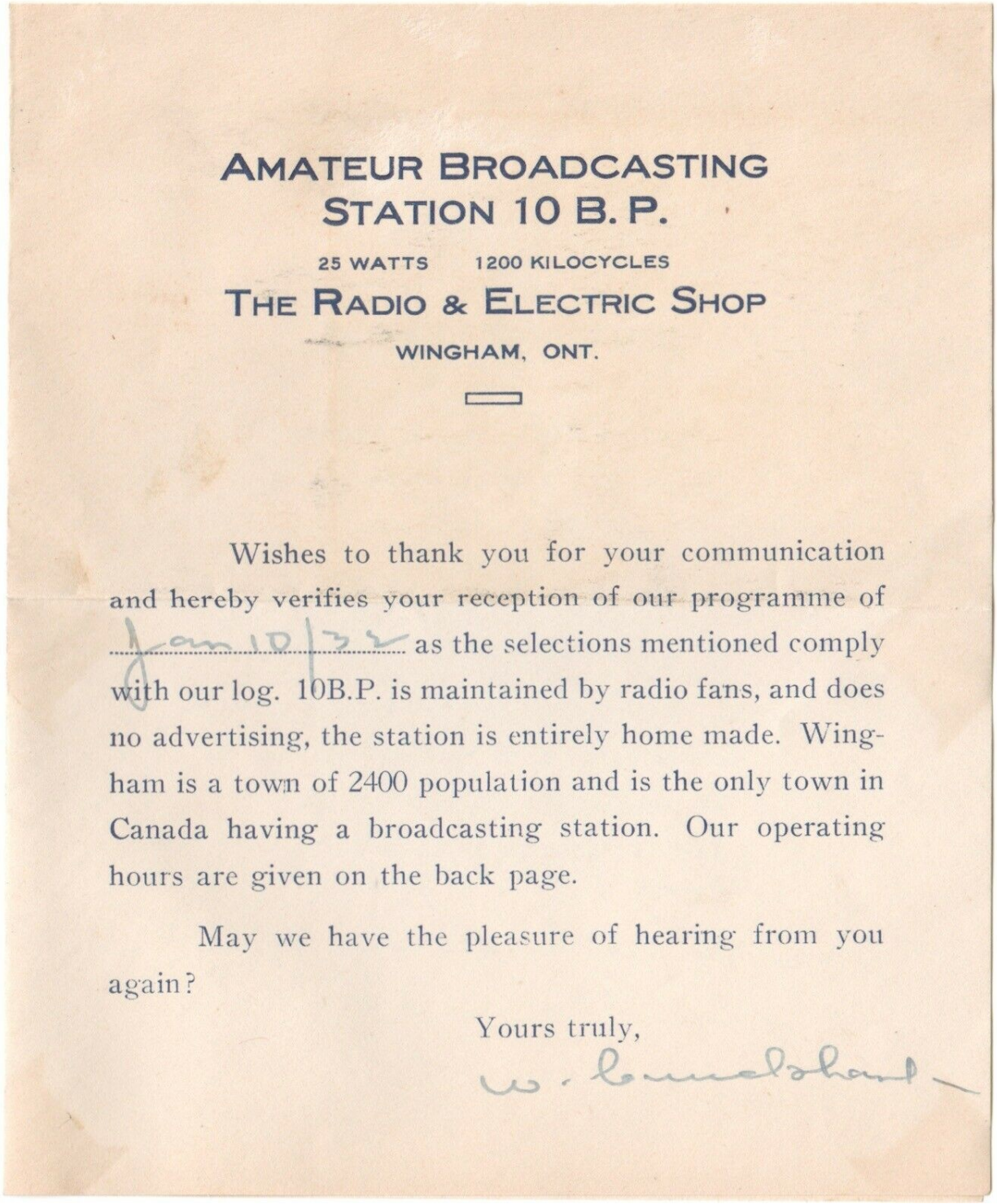
James Richardson & Sons Ltd. advertised itself as grain merchants, and a dealer in stocks and bonds. [18] Here's a 1932 QSL for both VE9CL and VE9JR showing their shortwave transmitters:



Now, here's another "mystery" station, VE9BW. The QSL confirms a QSO with amateur station W3FII on the 75 meter phone band in 1937. But was this an amateur or experimental station? It was located at commercial AM station CKLW. It's unusual, in any case.



Now, for a rarity — an actual "amateur" broadcasting station from Canada !



AMATEUR BROADCASTING
STATION 10 B. P.

25 WATTS 1200 KILOCYCLES

THE RADIO & ELECTRIC SHOP

WINGHAM, ONT.

Wishes to thank you for your communication and hereby verifies your reception of our programme of Jan 10/32 as the selections mentioned comply with our log. 10B.P. is maintained by radio fans, and does no advertising, the station is entirely home made. Wingham is a town of 2400 population and is the only town in Canada having a broadcasting station. Our operating hours are given on the back page.

May we have the pleasure of hearing from you again?

Yours truly,

W. Lumsden

Station 10BP operated from Wingham, Ontario with a power of only 25 Watts on 1200 kHz. The verification letter above is dated January 10, 1932, and claims to be the only town in Canada with its own broadcasting station. I have been unable to confirm this. It was an entirely "amateur" effort using home built equipment, and carried no advertising. What I can tell you about it is that the station was established in 1926 by local businessman W.T. ("Doc") Cruikshank, who built his transmitter on a "butter box," which he carried from his home to his workshop.

In 1935, he obtained his first commercial station license, CKNX — which in 1939 launched a full-time farm radio service. In 1955, he added a TV station, CKNX-TV. "Doc" died in 1971, at the same time that his station was sold to a British concern. He was subsequently inducted to the Canadian Association of Broadcasters Hall of Fame in 1986. [19] Today, CKNX is on 920 kHz, 10 kW daytime, 1 kW night.

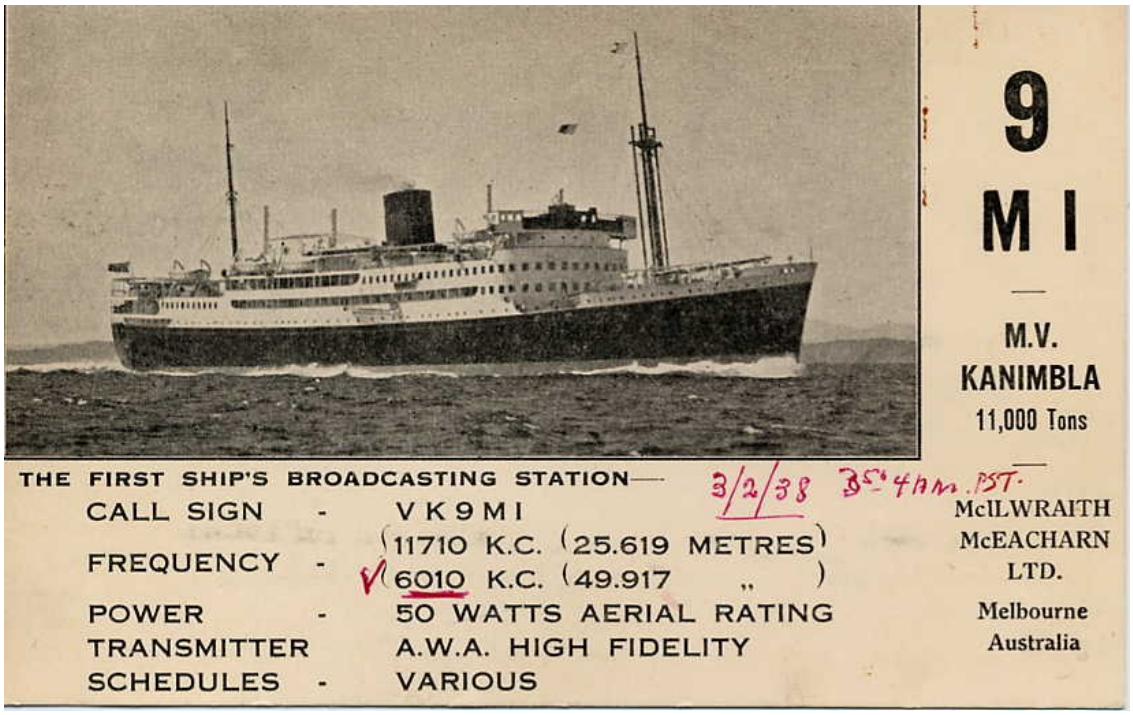
The first international broadcaster in Australia was established September, 1927. Its call was VK2ME. The station ran 20 kW from Pennant Hills, about 14 miles from Sydney. Its original antenna was a simple longwire, which had been attached to the tower used by standard AM broadcaster 2FC. The first "Empire Broadcast" made by the station was received in London at BBC station 2LO, and re-broadcast to an international audience. It was later re-broadcast by the General Electric station WGY in Schenectady, and even by English amateur station G2NM. [20] Here's their QSL from 1937:



Later, the transmitter site added a second unit, and the call of VK2ME was changed to VLK, the second transmitter, VLM. In more recent years, these stations were re-named again as VLQ and VLQ2, and subsequently, both assigned VLI. These stations were operated by Amalgamated Wireless Australasia, Ltd. [21]

The Way We Were

Not all shortwave broadcasters were land-based. One famous one was station VK9MI. It was the world's first shortwave broadcaster operating on board ship. The vessel was the M/V Kanimbla, an 11,000 ton ship owned by McIlwraith McEacharn Ltd. of Melbourne. Here's their QSL from 1938:

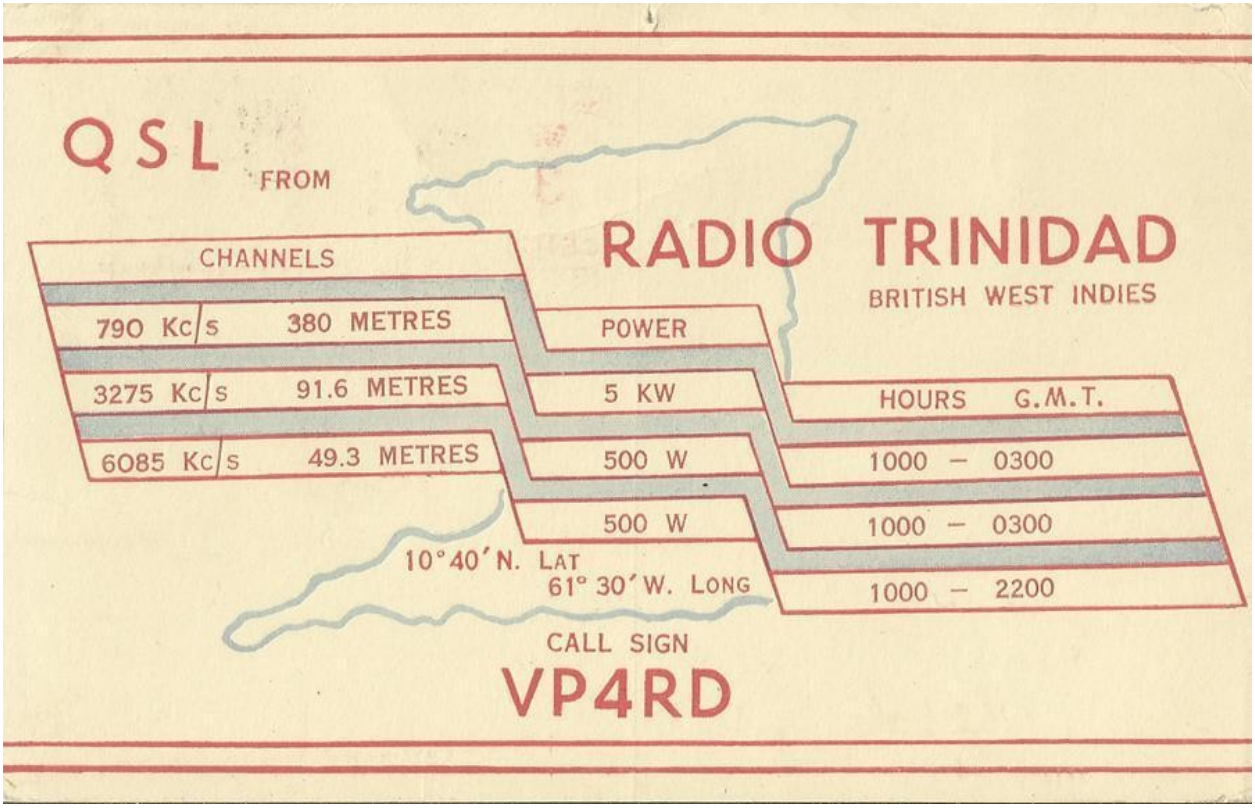


The card states that they ran 50 Watts on 6010 and 11710 kHz. The power is referenced as an "aerial rating," which I take to mean that the power output was based on measured antenna current, and final antenna power determined by calculation from the current and antenna impedance. The transmitter was manufactured by Amalgamated Wireless.

The ship was launched in 1936, and operated its shortwave station until 1939. During World War II, the ship became the HMS Kanimbla and HMAS Kanimbla, and then re-fitted in 1950. It was re-fitted again by a Japanese company and re-named TSMV Oriental Queen as a cruise ship in the Pacific. Its final voyage was in 1973, after which it was scrapped. [22]

The amateur radio prefix for Trinidad and Tobago is 9Y4 and 9Z4. But before their independence from the British Empire, the ham prefix was VP4. Not only amateur stations had call signs in this series, but also broadcast stations, as can be seen in our next example.

In the 1950s, Radio Trinidad operated with the call VP4RD on three frequencies: 790 kHz with 5 kW; 3275 kHz with 500 Watts, and 6085 kHz with 500 Watts. Here's their QSL card from 1957:



Radio Trinidad began its broadcasting career in 1947, and featured a variety of music, news and educational programs – including a daily program for its Indian population. [23]

These were East Indians, brought to the islands from British India as indentured workers, to toil alongside their African slave brethren. Other East Indians were brought to the Caribbean by French and Dutch colonists. [24]

In later years, Radio Trinidad added an FM outlet, but ceased broadcasting on all but its FM frequency of 99.5 MHz in 2015, which has an all-religious format. [25]

Venezuela was another country that used “amateur” calls for its broadcast stations, both standard AM and shortwave. Our first example is Radiodifusora Venezuela, which operated under the call YV3BC from Caracas.

Their QSL card from 1934 states that their medium wave frequency was 1200 kHz, and on shortwave 6150 kHz, with occasional broadcasts on 9510 kHz.



RADIODIFUSORA VENEZUELA

CARACAS-VENEZUELA

Kc. 1200 and 6150 Daily. 9510 Ocacional.

YV3BC

Tenemos el gusto de certificar que el Sr. R.H.Ward.

36-Wachusett. Street. Fitchburg Mass. U.S.A,

oyó nuestro Programa del 7 de Enero de 1934.

en 6150 *Kc. desde las* ..... *hasta las* .....

Para nosotros ha sido un placer haber recibido y verificado su amable reportaje y por ello le damos las más expresivas gracias.

p. RADIODIFUSORA VENEZUELA

H Castillo B

Tip. Ayacucho

Radiodifusora Venezuela started life first as an experimental station operated by Gerardo Silbesz in 1931 with the call YB9BC. Silbesz then replaced this station in 1932 with a new home-built 1 kW transmitter and a change of call sign to YV3BC. For many years, it featured traditional Venezuelan music programming, but changed format to rock in the 1970s, and shifted to medium wave on 790 kHz. By the early 2000s, many more medium wave AM frequencies were added, all identifying as Radio Venezuela. [26]

Another Caracas shortwave broadcaster was Radio Caracas, YV5RC. This station was originally YV2RC, but for some reason, the Venezuelan government decided to change all the call letters of its shortwave stations. [27] Unfortunately, very little can be discovered about this station, or its sister station, YV5RA. YV5RA was on medium wave, operating on 960 kHz with 5 kW, and YV5RC, the shortwave outlet, operated on 5800 kHz with a power of 1 kW. Here's a dual-QSL from these stations, dated February, 1937:



RADIO CARACAS

OUR SLOGAN:

"Le Habla a la Nación"

YV5RC - YV5RA

5.800 Kc. 1.000 WATTS. — 960 Kc. 5.000 WATTS.

WELCOME

to the ranks of our listeners. Your reception report dated

16 de febrero de 193 7

is correct.

YV5RC relays YV5RA'S programs and has been reported from every country in the world.

Best wishes from Caracas, the city of perpetual spring.

Ricardo Espina

DIRECTOR

YV5RC

RADIO CARACAS

YV5RA 960 KC. — YV5RC 5800 KC.

Also stated on the card is that YV5RC provided a relay of programming from station YV5RAS, about which no further information can be found; but it was probably another medium wave station.

By 1946, YV5RC had changed frequency to 1100 kHz on medium wave, with a secondary station transmitting on 1095 kHz, known as "Radio Culture." Both stations operated with a power of 1 kW. [28]

I hope you've enjoyed this review of shortwave broadcasters, especially those using what would normally be amateur radio calls. SWLing was my gateway to ham radio many years ago, as it was for many others of a "certain age." SWLing is still alive, and a highly interesting activity in itself. FLARC has established a special interest group concentrating on shortwave listening and broadcast band DXing (BCBDX). If you're interested in these radio activities, contact Dave Marthouse, N2AAM, or Ed Efchak, WX2R. Your columnist has already joined that group.

Until next month, 73 and stay well,

Fred W2AAB

NOTES

[1] Berg, Jerome S., Broadcasting on the Short Waves, 1945 to Today, p. 185, at: https://books.google.com/books?id=Ux9fZj6izuEC&pg=PA185&lpg=PA185&dq=radio+clube+de+cabo+verde+English&source=bl&ots=MPAMskUuIi&sig=ACfU3U2K6a4UcQFBISM_aj8OTx0FmLkiLQ&hl=en&sa=X&ved=2ahUKEwij8duovM_pAhVjlHIEHbeMBfUQ6AEwBnoECAoQAQ#v=onepage&q=radio%20clube%20de%20cabo%20verde%20English&f=false
[2] Ibid, p. 68
[3] "852" Tube Characteristics (RCA), at: http://www.tubecollectors.org/rca/archives/852.pdf
[4] Berg, Jerome S., On the Short Waves, 1923-1945: Broadcast Listening in the Pioneer Days of Radio, (no page number), at: https://books.google.com/books?id=BwJ7ET3erXAC&pg=PA76&lpg=PA76&dq=ct1aa+broadcaster&source=bl&ots=ImdW7vcnyM&sig=ACfU3U3czUVVSTUGyNB-65HMiB-hcZDUCw&hl=en&sa=X&ved=2ahUKEwiZvcahxs_pAhW9kHIEHTsDCdUQ6AEwAHoECAkQAQ#v=onepage&q=ct1aa%20broadcaster&f=false
[5] Ibid.
[6] From: "The CPRV Page," 1991, at: http://www.ontheshortwaves.com/CPRVPage/1991/cprv-pg91-1.html
[7] "The King Speaks to the World," *BBC Year-book for 1931,* in the article, "Heard Around the World," BBC Yearbook, 2016, at: https://www.transdiffusion.org/2016/08/18/heard-around-the-world
[8] *Wikipedia* article, "Clarence C. Moore," at: https://en.wikipedia.org/wiki/Clarence_C._Moore
[9] *Wikipedia* article, "Quad antenna," at: https://en.wikipedia.org/wiki/Quad_antenna
[10] Veras, Teo, "Brief Historical Review of Radio Broadcasting in the Dominican Republic," (English trans.), January 13, 2010, at: http://www.teoveras.com.do/breve-resena-historica-de-la-radiodifusion-en-la-republica-dominicana.html#.Xt_BPNVKjcs
[11] Edmonton Broadcasters Club depicts a QSL from VE9AI dated 1957, at: https://edmontonbroadcasters.com/stations/cjca-am/ve9ai-1957-qsl-card/

NOTES

[12] Berg, Jerome S., The Early Shortwave Stations: A Broadcasting History Through 1945, p. 259, at: https://books.google.com/books?id=XSWXAAAAQBAJ&pg=PA259&lpg=PA259&dq=VE9AI&source=bl&ots=qCMTfJ_oW7&sig=ACfU3U0uo0iGnR2B9DySySQbRNrNavGtSw&hl=en&sa=X&ved=2ahUKEwjCyZHy_fjpAhU9j3IEHfAUDEwQ6AEwBHoECAoQAQ#v=onepage&q=VE9AI&f=false
[13] "Canadian Callsign Database of Ham Radio Operators," at: https://web1.foxhollow.ca/ccd/?keywords=VE9AI
[14] "CFCX-SW," *History of Canadian Broadcasting,* Canadian Communication Foundation, at: https://www.broadcasting-history.ca/listing_and_histories/radio/cfcx-sw

[15] Berg, Jerome S., Ibid Note 4, p. 87, at: https://books.google.com/books?id=DIxdEZS5ShsC&pg=PA87&lpg=PA87&dq=VE9GW&source=bl&ots=qfZVB8gP5A&sig=ACfU3U03Cznp1BMO8TH8g2cWUxD2Eb5HBg&hl=en&sa=X&ved=2ahUKEwjrvd6LiPnpAhWvSDABHQn_CO8Q6AEwA3oECAoQAQ#v=onepage&q=VE9GW&f=false
[16] "Apex Radio Stations Worldwide," *Wavescan,* August 16, 2009, at: http://www.ontheshortwaves.com/Wavescan/wavescan090816.html
[17] "VE9CL and CJRX," *Radio Bulletin,* Bulletin No. 4, March-April, 1931, James Richardson & Sons, Ltd., at: https://worldradiohistory.com/Archive-Station-Promos/CJRM-CJRW-Radio-Bulletin.pdf
[18] Ibid.
[19] Potts, J. Lyman, "W.T. "Doc" Cruikshank (1897-1971)," *History of Canadian Broadcasting: Personalities,* at: http://www.broadcasting-history.ca/personalities/cruickshank-wt-doc

[20] Peterson, Dr. Adrian, "The Voice of Australia: AWA's VK2ME Sydney and VK3ME Melbourne," *Radio Heritage Foundation,* at: https://www.radioheritage.net/Story2.asp
[21] Ibid.
[22] Padula, Bob, "76th Anniversary of VK9MI," *Australian Shortwave Radio Journal,* April 9, 2012, at: http://swaus.blogspot.com/2012/04/76th-anniversary-of-vk9mi.html
[23] *Wikipedia* article: "Radio Trinidad," at: https://en.wikipedia.org/wiki/Radio_Trinidad
[24] *Wikipedia* article: "Indo-Caribbeans," at: https://en.wikipedia.org/wiki/Indo-Caribbeans
[25] See note [23] above.

[26] *Wikipedia* article: "Circuito Radio Venezuela," [English trans.: Radio Venezuela Circuit], at: https://es.wikipedia.org/wiki/Circuito_Radio_Venezuela

[27] Berg, Jerome S., Ibid Note [12], p. 159, at: https://books.google.com/books?id=XSWXAAAAQBAJ&pg=PA159&lpg=PA159&dq=YV5RC&source=bl&ots=qCMTgN_iRc&sig=ACfU3U0uBP07WLilf-hq0IGNAbyUP2oBdw&hl=en&sa=X&ved=2ahUKEwjR7O2Dhf3pAhVSTjABHW2jCWUQ6AEwAXoECAoQAQ#v=onepage&q=YV5RC&f=false

[28] Long and Medium Wave Broadcasting Stations of the World – According to Frequency, Foreign Broadcast Information Branch, Central Intelligence Agency, Washington, D.C., 2 January, 1946, at: https://books.google.com/books?id=hPMTAAAAIAAJ&pg=PA41&lpg=PA41&dq=YV5RC&source=bl&ots=8SCAPgH5Ep&sig=ACfU3U1NCosiJEkw8ceYHyEXqGNj06HU9g&hl=en&sa=X&ved=2ahUKEwj_wKSfjv3pAhU_TDABHbGIBk0Q6AEwAHoECAoQAQ#v=onepage&q=YV5RC&f=false

de N4GG

Coax Ratings

I'm sometimes admonished for over-stressing components, particularly coax. RG8-X is a case-in-point. I have run 1,500 watts on RG8-X and been told "You're not supposed to do that." I've never had any fail, but it does get warm.

Coax and other components are typically rated for one or two types of service. Those rating(s) can usually be found if you dig deep enough into the .PDF spec sheets. The ratings are:

CCS: Continuous commercial service (Usually provided)

ICAS: Intermittent commercial and amateur service (Not provided very often anymore)

Other ratings appear now and then too, such as: "Continuous ICAS." This is sometimes used to describe RTTY, SSTV and digital modes where the transmissions are "continuous" followed by some "intermittent" off time, none of which is specified. CCS and ICAS are terms of art. Continuous (CCS) means continuous, intermittent (ICAS) is taken to mean a 50% duty cycle.

These ratings began with power tubes and have continued to be used to cover new devices as they have come along. Transistors, coax, power transformers and other products all have, or should have, CCS ratings. In my experience, ICAS ratings were frequently offered years ago but less so today. It's understood that operating within the CCS rating of a component will yield its full useable life. Operating at the ICAS rating means a decrease in useful life will be expected in exchange for increased performance (power output in the case of transmitting tubes).

Power transformer ratings are particularly important when you consider the expense of replacing the HV transformer in a KW linear amplifier. Alpha has made some of the finest amps there are. From the advertising for their model 8410: 1500W, 100% duty cycle, no time limitation, key down forever. That's a CCS rating! Alpha amps are expensive but you get what you pay for. Their reliability and performance in amateur service (ICAS) is superb.

Hopefully, the designers of any gear you buy have dealt with the ratings of the key components and designed-in what's needed. Regrettably this is not always the case. There are 1,500 watt amplifiers that weigh 30 pounds and others than weigh 90 pounds. A lot of the weight is in the power transformer. The 30 lb amplifier might, or might not, barely meet ICAS specs. The 90 lb amp might be good for CCS. If you have been around the hobby a while you have probably seen lightweight (and typically low priced) amplifiers fail. Another notoriously failure-prone product is "high power" antenna tuners. Many of these are advertised as able to do more than they can actually do. Many operate on the edge of ICAS or worse.

Meanwhile, while the internal components of our store-bought gear are selected by the designers, there are other areas where we get to pick the parts ourselves. One such area is coax and coax connectors. In February, 2019 I wrote about UHF connectors. That column in five words: "Amphenol or not at all." So, what about coax?

Here are the CCS ratings for RG8-X (Belden 9258):

-40 to +80 C	
1,000 watts	@ 10 MHz
370 Watts	@ 50 MHz
250 Watts	@ 100 MHz
190 Watts	@ 200 MH
110 Watts	@ 400 MHz
75 Watts	@ 700 MHz
60 Watts	@ 1 GHz

There are no published ICAS ratings that I can find. This is often the case. Sticking with CCS ratings is the conservative thing to do. If we are within the CCS ratings and operating ICAS then we have margin, and margin is always good... except, we may be spending more money and taking on more weight than we need to. Sometimes ICAS is all we need or can afford.

Note temperature and frequency are given for the RG8-X CCS ratings. RG8-X will not fail when carrying 1,000 watts at 10 MHz, at +80 C for 24/7/365 continuous service. This is far removed for what we hams need. We don't operate in 85 centigrade environments and we don't transmit continuous carriers for days on end. We should be able to run more power in RG8-X, yes? Well, probably. Though not explicitly stated, the CCS ratings are for an SWR of 1:1. We don't usually operate there either. As hams, non-continuous service and reduced temperature are in our favor and increased SWR is working against us.

So, what can RG8-X handle in ICAS service? It's a good question and there is no objective answer. It depends on "everything." Ambient temperature, frequency, SWR and how "intermittent" our intermittent operation actually is. The duty cycle for CW and SSB is roughly 50%. RTTY, SSTV etc may be on and off 50% of the time but the transmissions are long – pushing us closer to needing to stay within the CCS ratings.

Let me add one more item – the CCS ratings are "guaranteed" by the manufacturers. They include a margin (sometimes called safety factor) kept in the manufacturers' hip pocket. One that is held and not revealed, but must be there to not disappoint the customer and/or cause a warranty claim. In CCS service, the 1,000 watts at 10 MHz CCS rating for RG8-X can be exceeded by some amount (taking the manufactures' margin for ourselves) but by how much? We don't know.

A good rule of thumb is the ICAS rating is between 15% and 50% greater than the CCS rating. That's a wide range, because it covers a wide range of pluses and minuses based on how we actually use something, and based on the margin the manufacturer has built in.

Around The Shack

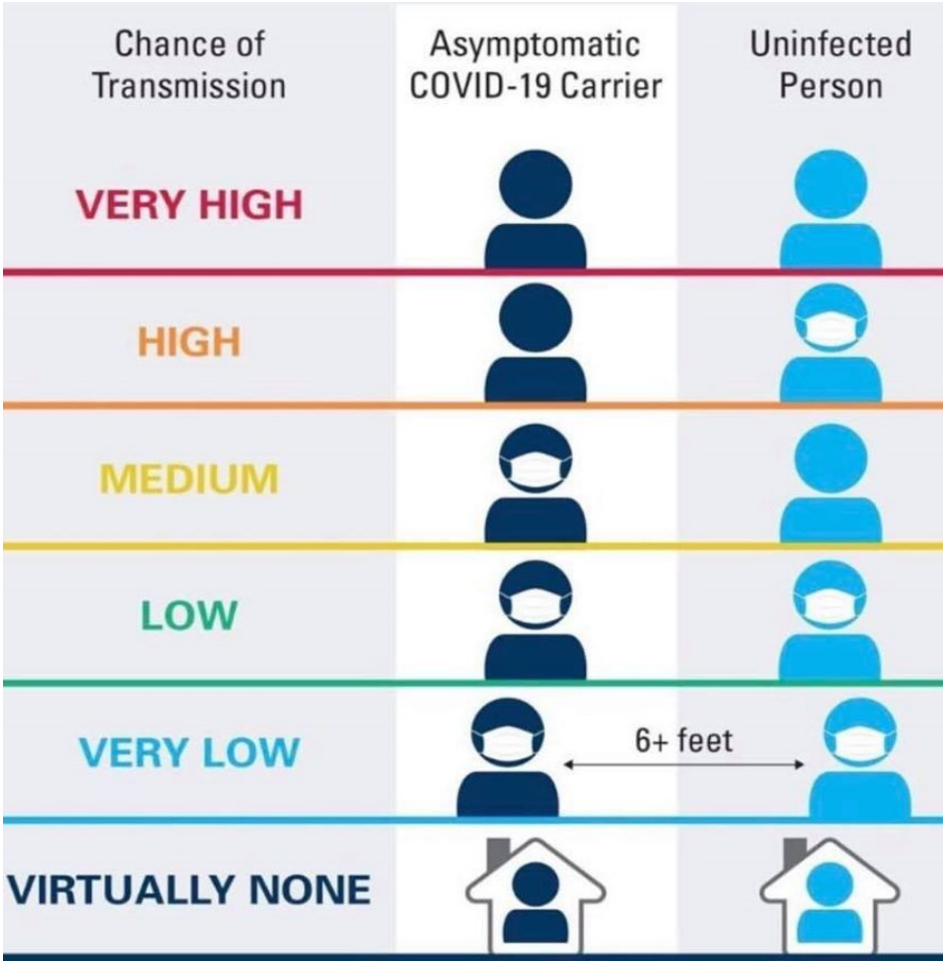
Okay, but after all this rambling, we need a number. I have run 1,500 watts up to 30 MHz and 2:1 SWR on RG8-X for years without a single failure. That's my best answer.

I'll throw one more item into the mix: RG8-X, in particular, is offered by many manufacturers and is made in China, the US and many other places. To me, Belden is like Amphenol. The product comes with a specific part number and specification sheet. It is "the good stuff." If you are going to push the limits on RG8-X remember that the limit will depend on who made it and where.

And another thing! How old is your RG8-X? It might matter. We don't think of coax having a lifespan, but rough use, particularly outdoors, will degrade coax and cause a loss of margin.

I can't tell if this column is helpful or just confusing. Consider all of the above and make a judgment call. If you are OCD, this might not be very satisfying!

73,
Hal N4GG



Vintage Radio Quiz

By: Fred Belghaus W2AAB

Think you know your vintage radio equipment? Here's a little quiz for you. Below is a list of model numbers and model names used by vintage amateur radio equipment manufacturers. Can you identify the manufacturer? **Score 5 points** for each correct manufacturer identified (total 100). Answers will appear in next month's *Resonator.*

Model number or name

HA-2
HC-2
HQ-170
HX-1
HXL-1
SP-600
Manufacturer_____

FPM-300
HT-37
S-85
SR-42/-46
SX-101A
Manufacturer_____

AGS
FB-7
HRO
NC-183D
NCL-1
NCX-3/-5
Manufacturer_____

32S-1/-2/-3
32V/32V-1/-2/-3
75A/75A-1/-2/-3/-4
75S-1/-2/-3
KWM-2/-380
Manufacturer_____

R-9
T-9
TBS-50
Manufacturer_____

Vintage Radio Quiz

"Adventurer"
"Challenger"
"Invader"
"Navigator"
"Pacemaker"
"Ranger"
"Thunderbolt"
"Valiant"
Manufacturer_____

10A
20A
100V
200V
"Slicer"
Manufacturer_____

2B
L4-
R4-/-R7/-R8
T4-
TR-3/-4/-6/-7
Manufacturer_____

720
722
723
753
Manufacturer_____

"Commander"
"Communicator"
G-28/-50/-76
GC-105
GSB-100/-200/-201
"Sidewinder"
Manufacturer_____

DX-100
GR-91
HR-10
HW-101
HX-1
SB-301
Manufacturer_____

Continued on next page.

Vintage Radio Quiz, cont'd

"Explor-Air"
HA-410/-460/-650
HE-10/-30/-45/-50/-90
KT-200/-320
Actual manufacturer_____
(Not the catalog house that sold these)!

CX-7
CX-11
Manufacturer_____

240
250
350
500
Manufacturer_____
"Apollo"
"Interceptor"
"Saturn"
"Thor"
"Venus"
"Zeus"
Manufacturer_____ (Hint: They were once located in Morris County)

GT-550
III (Roman numeral)
V (Roman numeral)
Manufacturer_____

R-599
R-1000/-2000/-5000
T-599
Manufacturer_____

FL-50/-100
FR-50/-101
FRG-7
FTDX-400
Manufacturer_____

6N2
PC2
PC6
Manufacturer_____ (Hint: They were once in Clifton)

Well, how'd you do with these? Maybe I'll add more, later. 73, Fred W2AAB

FLARC Member Is ARRL Foundation Scholarship Winner!

The ARRL Foundation has announced the recipients of its 2020 scholarship awards. There were 103 awards this year, totaling $144,450. The non-profit Amateur Radio Digital Communications (ARDC) has generously awarded a grant to the ARRL Foundation to match each scholarship award on a dollar-for-dollar basis, lifting the grand total of scholarships awarded to $288,900.

Renee Smith KD2JEZ, a FLARC member, is one of this year's recipients. The daughter of proud dad Lee KD2DRS, Renee is currently working as a sailing instructor and also a lifeguard during the summers. She was a high school band student conductor and member of three honor societies.

She is heading to Connecticut College on a partial scholarship this fall to study biochemistry and botany.

She was first licensed in 2015 and holds a Technician ticket. She has participated in LIMARC Fox Hunts and visited Hamvention in 2018. She works FT8 and has participated in Field Day.

Congratulations Renee!!



Renee KD2JEZ

A Little Fun With Call Letters

By: Fred Belghaus W2AAB

Much of my activity these days is either chasing DX or contesting. During contests, especially, I sometimes work some "oddities" in the form of similar calls, or calls with unusual suffixes.

One example of this was during the June Field Day. On 40 meter CW, I worked three stations in a row that made me think I was hearing double — no, triple. Starting at 0139 on June 28th, I worked K9RN. Then, one minute later, at 0140, I worked W9RN. Then, one minute after that, at 0141, I worked W9RNY.

It's a good thing I hadn't been partaking of any intoxicating substances, or I would have gotten all three calls wrong, or sent "DUPE" to two out of three of them.

I also operate in a lot of state QSO parties. As a County Hunter, I always look for new counties, and state QSO parties are a great way to find new ones, especially from small states with a lot of counties.

In the Arkansas QSO Party, I worked three unusual stations. The first two had calls that were, well, memorable. At first, I was surprised to hear stations with calls like theirs, but I soon realized that they were part of a state theme.

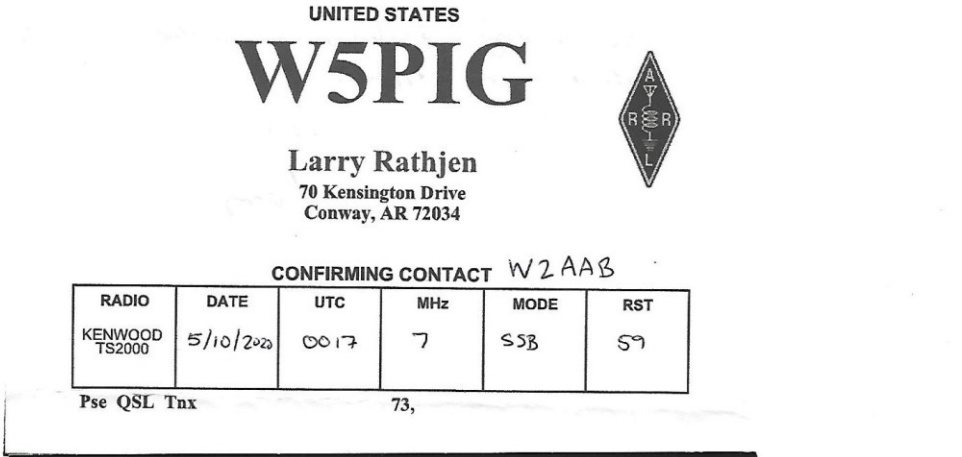
The Arkansas Razorbacks, also known as the Hogs, are the nicknames for the University of Arkansas intercollegiate athletic teams. So it would stand to reason that Arkansas hams would be likely to memorialize their favorite state animal in their calls.

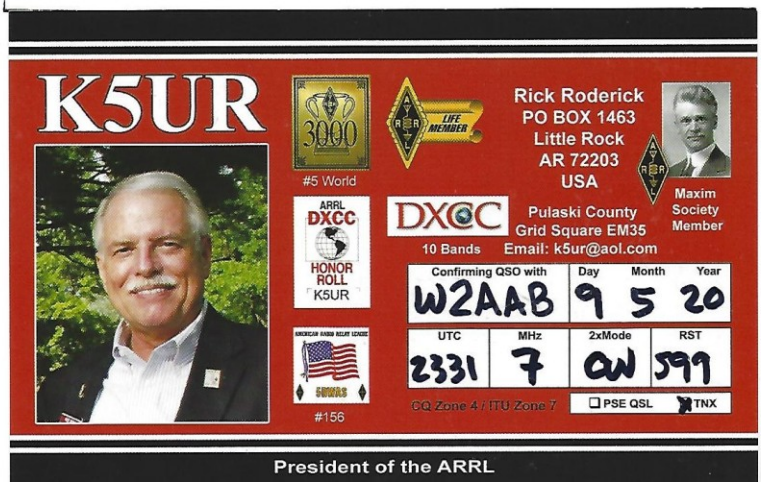
The first of these that I worked was **K5HOG**, the Razorback Radio Club, worked on 40 meter SSB. The second was **W5PIG**, Larry, in Conway, Arkansas, also worked on 40 meter SSB.

The third unusual station worked was **K5UR**, worked on 40 CW. His name is Rick, and his QTH is Little Rock. If the call sounds familiar, it should. The operator, Rick Roderick, is the President of the A.R.R.L.

On the following page are the QSL cards I received from them….







It just goes to show that you never know who you might work in a state QSO Party. Have you worked any unusual or interesting calls lately? Why not tell us about them?

73, Fred W2AAB

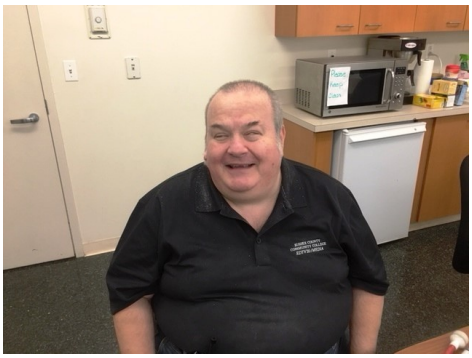
Dave N2AAM Explains The World of Radio Spectrum At Monitoring SIG Zoom Meeting

To a crowd of 59 Zoom attendees on July 31st, Dave N2AAM conducted a highly educational hour on radio listening beyond the amateur bands. The program, entitled "*From Zero To 300GHZ In 30 Minutes: A Spectrum Overview*" took attendees through early radio broadcasts, audio from Bloomberg radio WBBR as heard in Norway, early intercontinental broadcasts, aircraft and military listening, satellites and the monitoring of Air Force One and the Space Shuttle. A mix of history, current affairs, and hints and kinks about radio monitoring made for a fast-moving and educational evening.

The program, entirely audio in nature, was a first for FLARC. Dave proved to be totally knowledgeable in subject matter and the discussion lead to a number of questions for follow-up regarding group member interests.

Attendees also included a number of new and/or non-amateurs, which is new for FLARC and most welcome to our club.

The SIG promises more programs on monitoring topics and welcomes your input. Consisting now of about 30 members, we encourage you to join in on the fun and help make a contribution. Just go to groups.io for FLARC, find the "Monitoring Group" and join.



Dave N2AAM

Fair Lawn RACES/ARES Corner, cont'd

The Fair Lawn Night Out, which FL-ARES would have participated in, has been postponed until October. Please sign up for various nets and activities taking place at the following email address:
https://arrl.volunteerhub.com /lp/nnj

Info on FL-RACES is as follows: Our next FL-RACES KB2FLR net will take place on Wednesday, August 12th at 2015 hours on the Fair Lawn ARC Repeater as well as the NJ2BS Repeater (frequencies noted above). Thank you to the Fair Lawn Amateur Radio Club for permitting FL-RACES for using the repeater.

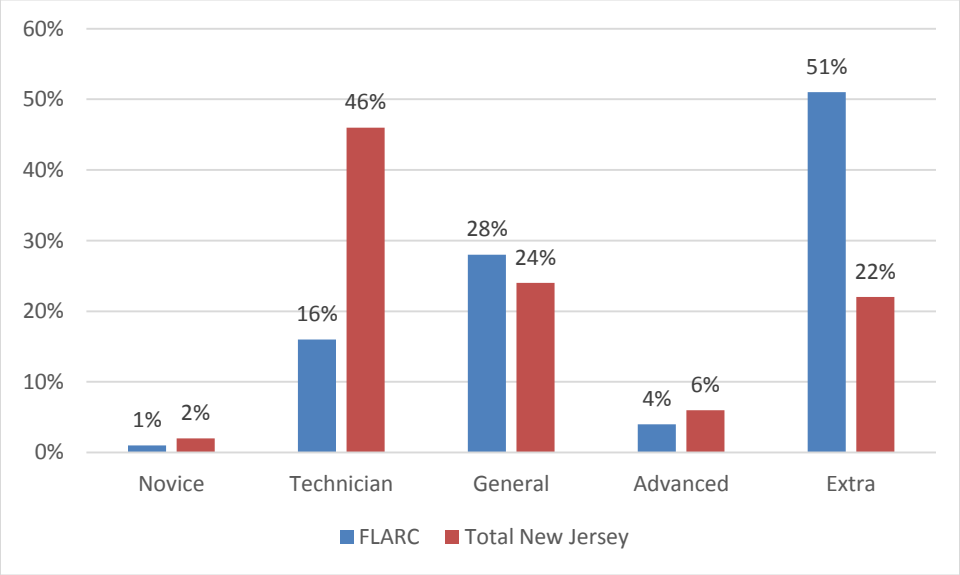
FL-RACES is part of several RACES groups which operate within Bergen County and from time to time has training opportunities with Bergen County RACES. We were the Net Control Operating Station for the BC-RACES Net which took place on Wednesday, June 24th. A thank you goes out to the FL-RACES members who participated in the BC-RACES Net. During the COVID-19 pandemic, our monthly briefings take place during the FLARC business meeting. Please join us for the next FL-RACES briefing. The volunteer efforts of our members are very much appreciated.

If you are interested in joining the Fair Lawn RACES, please contact me. Anyone who's a licensed amateur radio operator may join Fair Lawn RACES and there's no residential requirement.

For information regarding Bergen County RACES, please go to http://www.bcnjraces.org.
Please be safe and well.

Thank you very much.
73.
David KD2MOB

2019 License Class Distribution:
FLARC Compared With All New Jersey Hams





Digital Radio HotSpots and Dongles

By Robert Holstrom, KD2BKD

A digital radio HotSpot is a personal low power (10 to 20 mW) repeater like device that enables digital radios to link directly to digital radio services around the world using internet connectivity. This can be done with DMR, D-Star, Fusion (C4FM), P25, NXDN, etc. Some HotSpots can cross link to communicate between different digital radio systems.

With DMR, a HotSpot can access all the TalkGroups. It is like EchoLink but an actual radio, typically HT, is used with the HotSpot connected to an internet connection. ***The DMR Special Interest Group is working on getting a FLARC TalkGroup for future DMR Nets and regular communication.***

Some commercially available hotspots can be seen below. The *NEW* openSPOT3 (center) is a self-contained unit with battery, which can use Wi-Fi mobile data from cellphone to connect to digital radio systems. Put this in one pocket and your cellphone in another and talk digital radio anywhere on a HT. The data used is about 4Mb per hour.







Building a hotspot is also an option. Many boards are available to be used with Raspberry Pi to make a hotspot. The one on the left uses a MMDVM board and Raspberry Pi Zero W.







Some radios can also be used as a hotspot. The Radioddity GD-77 running "OpenGD77" firmware can be used to make a DMR only higher power (1 watt) hotspot when the programming cable is connected to Raspberry Pi's USB port running PiStar. You will need a second DMR radio to talk / listen on.



A dongle is a device which connect directly to a computer, typically via USB, to get onto the digital radio system via the internet. No radio is required. The computer's soundcard, microphone, and speaker are used to talk/listen to the digital radio systems. This is very similar to EchoLink.



Those interested in learning more about DMR and HotSpots join the DMR Special Interest Group. One of the projects posted will be on how to build HotSpots using the MMDVM board and Raspberry Pi Zero W for about $50.00.

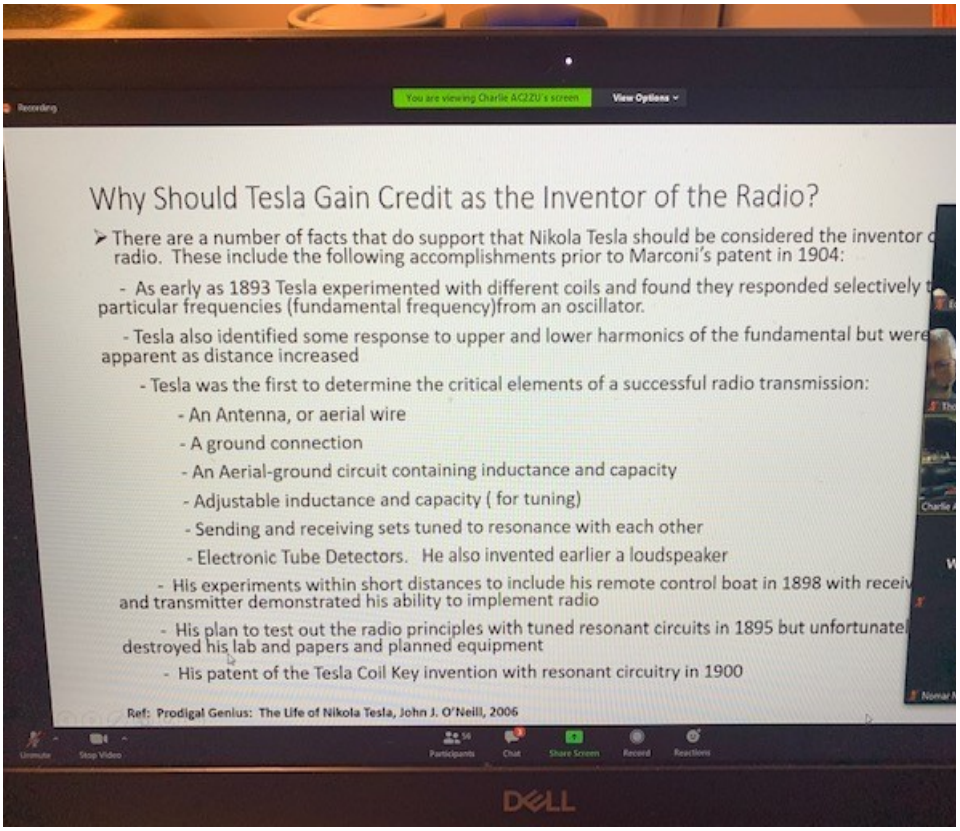
Charlie AC2ZU Highlights The July 18th *Kawfee Tawk* Series With The Nikola Tesla You Never Knew

To an audience of 57 club members and guests, Charlie AC2ZU of our club used a Zoom meeting to review the life and work of Nikola Tesla, the often overlooked pioneer of radio and electronics in the early 20th century. In both a professional and academic presentation, he focused on Tesla's key contributions to the dynamo, the induction motor, the Tesla coil and his life's fascination with the numbers 3, 6, and 9.

Neatly incorporating the use of video and PowerPoint, Charlie took the group through Tesla's early work with Westinghouse, his intellectual battles with Edison and Marconi and a life dedicated to science. His work on early radio was particularly noted – while Marconi gets all the credit, it was Tesla that may have indeed been the true inventor of the medium.

The audience, with attendees from as far as England and Puerto Rico, offered great comments and questions that added to the evening.

A night to remember and hopefully we can ask Charlie to present again soon!



DMR Special Interest Group

By Robert Holstrom KD2BKD

Since the DMR radio programming presentation, and start of the DMR SIG, there has been a lot of interest in DMR.

Suggested by Dave, N2AAM, many new DMR SIG members have purchased the Radioddity GD77 which does analog and DMR on 2m and 440MHz bands. With this radio and "OpenGD77" firmware the radio becomes more "ham" friendly. The "OpenGD77" firmware was written by "hams" for "hams". The HT radio is under $100.00 and many in the group have updated to the "OpenGD77" firmware. All information on how to update, including the firmware file, is on the DMR SIG. A "codeplug" for this radio with many of the local 2m & 440 DMR and analog repeaters is also available on the DMR SIG.

Did you know that the W2NPT repeater supports DMR. Well it does, but it is not networked. Most DMR repeaters are UHF 440MHz but W2NPT is on the 2 meter band. Direct RF is the only way to use DMR on W2NPT for now. Information on the DMR setting is available on the DMR SIG and is also available on the "OpenGD77" codeplug.

Members of the group are also using TalkGroup 310015 temporarily to show the DMR administrator that we have DMR traffic. We hope within a couple of months to put in the paperwork for a dedicated FLARC DMR TalkGroup. Maybe this TalkGroup will be available on the W2NPT repeater also?

Come join in on all the DMR excitement! Contact Bob H. KD2BKD@optonline.net for information on joining. Or just go to the club website FairLawnARC.org and use the "Join Special Interest Group(s)" link on left.

DE Bob KD2BKD

In A Nutshell

Social distancing?

That is what we have been doing for about a century! I mean talking to each other by RADIO. Not digital, not code or radio teletype, but talking to each other, hearing the character of the distant voice, the distinctness of that voice and of course conversing back and forth. Not just trying to rack up amounts of contacts, but engaging in meaningful conversation and getting to know the human being at the other end.

In this day of imposed isolation, it is all the more meaningful to have that human touch that a good old 'rag chew' provides. To that end personally I have been on 75 meters lower sideband and have made many new friends and have been on several nets including those using vintage gear! Also have been on nets with those involved with vintage radio in general including early broadcast radio and they are located in New England area, Maine in particular.

So get on the air and converse with other hams. You never know who you might run into.
Fred Wawra, W2ABE, 73.

FLARC Dits and Dahs

Judith KC2LTM and Fred W2ABE visited the hamfest of the NJ Antique Radio Club in Wall Township, NJ on July 25th. . There they ran into club member Ria N2RJ with her children.

The July 27th *Near and Far Net* had another "far" with Patrick JS6UGC checking in from Okinawa, Japan. Kanichiwa!

Theoretics Demystified

Measurements!
Not Marilyn Monroe's or anybody else's!

In this day and age of space travel and microbiology there needed to be a much more precise methodology of determining measurement standards. Do any of you wish you had more hours in the day? Well, wait about 1.4 billion years and your day will be thirty hours. You see, the earth is slowly spinning down to the tune of about one millisecond every hundred years.

Another measurement is the meter which we are all acquainted with in our daily ham lives. Used to be that it was determined by two markings on an iridium bar at zero degrees Celsius. Not any more. Now a meter is defined as the distance light travels in a vacuum in 1/299,792,458 of a second!! Why all this precision?

During the recent launch of the SpaceX rocket, President Trump asked what margin of error there was in the launch time. The answer from the SpaceX representative was ONE second or the launch would have to be postponed since the timing was so precise to reach the desired target.

This simply illustrates the need for more precise measurement in our technologically shrinking and expanding world. Sounds paradoxical but so much is being done on a small scale as in nano technology and on the large scale as in travel to Mars and beyond. These advances and explorations are forcing the necessity for greater precision and accuracy. Take your smartphone or computer for example. The sometimes meaningless academic research has led the possible manufacture of the smartphone and the large flat screen TVs and monitors we now use along with the infrastructures that now support them. If you want to get an inkling of how "small" small really is, look inside any device with one of those three eighths inch integrated circuits with two hundred connection and try to visualize five hundred thousand transistors inside! To get back to the new standards. The ampere was defined as measuring the current in two really long wires in a vacuum, now it is defined as six quintillion electrical charges per second!!

Theoretics Demystified, cont'd.

Another standard now updated is Kelvin, the precise measurement of temperature. It used to be that it was where water could exist in three states at a specific pressure but no more! Now it is defined as measured by the Boltzmann constant: the kinetic energy of one atom. Zero Kelvin is defined as where all molecular movement ceases but the closest that has been scientifically achieved has been about a millionth of a Kelvin!!

Next we have weight -- the kilogram or one thousand grams. Used to be that this was based upon the weight of a piece of platinum-iridium stored in a secure vault, but over time micro amounts of dust and debris have added to the weight of the sample causing inaccuracies when checked against other samples.

Therefore, now the standard is a certain amount of material placed on a Kibble balance which generates an electromagnetic output proportional to the sample being tested. Further advances and necessity for precision are forcing the scientific community to re-evaluate all forms of measurement standards so as to enable greater and more different discoveries that will filter down into our everyday lives.

Lastly the candela was defined as the glow off of a small piece of freezing platinum, but now is defined as the glow of a single candle flame, that yellow green light that our are eyes designed to see. This is why color corrected led lights for your home of 27k are the best for your eyes and the blueish light from some of the older car led headlights and cheap flashlights are not. That is also why the blue blocking glasses are sold. Also it is suggested not to look at your pc or phone two hours before sleep unless the screen has been adjusted to filter out blue light.

All the above illustrates the need for greater accuracy in measurement and the subsequent increase in knowledge gained.

What does this have to do with amateur radio and radio in general? Everything. Without all the precision, the radios and technology we now use and enjoy, would not be possible.

DE Fred W2ABE

President's Message, cont'd

Another very well attended virtual presentation with attendees from near and far. Our appreciation to all that make it possible to continue united during these times and spread the light of knowledge, experiences, and valuable information. Please continue to support FLARC and its Special Interest Groups.

Also, the month of August marks a first for FLARC. The FLARC VE team will again start their exam sessions, but with a twist. All those present that will be taking their tests, will do it while in their car. The VE team has established proper security measures to ensure proper testing protocols along with the necessary social distancing measures. Close to a dozen VEs have committed to participate and make sure we have a smooth and successful test session. We want to extend our appreciation to Gene, WO2W and the entire FLARC VE Team for all they do and for providing a safe, secure, and organized test session. If you are looking to upgrade or know of someone who wants to take their test, contact Gene at WO2W@arrl.net for more information and reservations.

As you can see, FLARC is always "ON" — we never sleep (well, maybe we sometimes do). We value our members and we want to make sure that we continue to be a Club that all of you can feel proud of and when the Fair Lawn Amateur Radio Club comes to mind, you can smile and say "that's my club."

God bless you all, continue to take care of yourselves and "I'll see ya' on the radio."

73

Nomar /NP4H

August 8th Volunteer Examiners



At Deadline: Some Possible Antenna Damage Due To The Tropical Storm

On a casual walk past the club on August 7th, Ed WX2R noticed that it appears that one of the verticals came down in Tuesday's tropical storm. He passed along the information as well as some pix (below) from outside the building. Gene WO2W confirmed that it is the Mesh antenna.

It's premature to judge if and how much damage might have occurred until the Technical Committee can go on the roof and make an assessment.



One of the verticals apparently on its side on August 7, 2020



A closer view from near the clubhouse door

Gene WO2W reports that the August 8th VE test session held outdoors at the Fair Lawn Recycling Center went well. Eleven candidates took tests and nine passed, including one who passed all three exams!

VE Testing Resumes

A great turnout of VEs, so a big FLARC TNX to all!



It's all about the paperwork… even in the field



Students lined up in their vehicles to take their tests



The "mobile processing department" in action

Noel W2MSA To Present Next "Kawfee Tawk" on August 21st

Noel's Zoom talk will feature "Parks on the Air". Since the ARRL National Parks event three years ago, this area of station activation continues to grow in interest. Noel will take us through his experiences as an activator.

And They Say That FLARC Is Just A Casual Contest Club…

George W3EH reports that the results for the March ARRL DX contest are now on the web. The September QST will list the top ten in each category.

W2NPT landed in the top ten nationwide for 15 meters.

Fred W2AAB did even better, making it to the top five in the 40 meter category.

Congrats to FLARC and Fred!!!

A Shorter Walk To the Clubhouse

The parking lot adjacent to the Recreation Center is now under construction. Now if we could only get in…



Use your imagination…
but it will be a shorter walk inside

At Deadline:

Stay Tuned For A Foxhunt In September!!

At Deadline:
Where Are The Meeting Notes?

Secretary Randy WU2S had to miss the business meeting because he had no power or internet service, due to the recent storm, and rather than hold the newsletter for the meeting notes, it is better to give Randy all the time he needs to listen to them and then transcribe them for us.

The notes will be distributed via email and then (again) in September's Resonator.